

KAWAI

DIGITAL DRUM MACHINE **R-50e**

OWNER'S MANUAL

INTRODUCTION

FEATURES

PROFESSIONAL-QUALITY PCM SOUNDS

The R-50e's 24 separate drum and tuned percussion sounds have all been recorded in the professional 12-bit PCM with a sampling rate of 32k. The sound quality is suitable for any recording situation, including Compact Disk.

EASY TO USE

Getting around on the R-50e is straight-forward and intuitive. It even comes with 50 preset rhythm patterns and 4 preset pad set-ups to get you started.

PROGRAMMABLE DRUM KITS

The R-50e provides for 8 user-defined pad set-ups. Each pad can be assigned a drum, tuning, pan, accent, level, delay, gate and flange.

PROGRAMMABLE TRIGGERS

Eight triggers can be incorporated into drum patterns to fire external MIDI devices.

FLEXIBLE OUTPUT

Stereo and mono outputs are fed by the stereo pan control on each drum. A sound can also be assigned to the individual output on the rear panel.

Thank you for purchasing the Kawai R-50e Digital Drum Machine! While the R-50e is easy to operate, this Owner's Manual contains valuable information to help you get the most from your new instrument. We recommend that you read it carefully and keep it handy for future reference.

COMPLETE CAPABILITIES

50 user-defined rhythm patterns with step or real-time recording and editing. Build songs with sophisticated features like insert, delete, and multiply. 10 songs can be linked together to make performances smoother.

FULL MIDI IMPLEMENTATION

The R-50e's MIDI features let you record patterns from external sources such as keyboards and drum pads. The internal sounds can also be triggered by external devices such as sequencers. MIDI clock in and out includes Song Pointer for synchronization with sequencers, drum machines and tape. The system-exclusive implementation also enables remote operation and MIDI Data Dumps to another R-50e or MIDI data storage device.

POLYPHONIC

Sounds are dynamically assigned to the R-50e's eight voices. Sounds can be replayed without cutting off the decay of the original sound.

WARNING: This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it can cause interference to radio communications. The rules with which it must comply afford reasonable protection against interference when used in most locations. However, there can be no guarantee that such interference will not occur in a particular installation. If this equipment does not cause interference to radio or the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

- reorient the receiving antenna.
- move the receiver away from the drum machine.
- plug the digital piano into a different outlet so that drum machine and receiver are on different branch circuits.
- consult the dealer or an experienced radio television technician.

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2. CARE AND MAINTENANCE

PROTECT YOUR R-50e FROM:

- Direct sunlight and exposure to the elements
- Temperature and humidity extremes
- Unstable or "noisy" AC power
- Dust and sand
- Vibration during transport

POWER SUPPLY

- Use only the 12-volt power supply included with your R-50e. **Other power supplies may damage the unit.**
- Make sure that all power switches are off before changing equipment connections

CLEANING

- Clean the instrument with a soft cloth, a mild detergent and lukewarm water.
- Never use harsh or abrasive cleansers or organic solvents.

HELPFUL HINTS

• BATTERY BACK-UP

The lithium battery that preserves memory contents while the power supply is off is good for more than five years of normal use. We recommend however, that you have your nearest authorized service representative replace it after 5 years have passed.

• LINE NOISE RESET

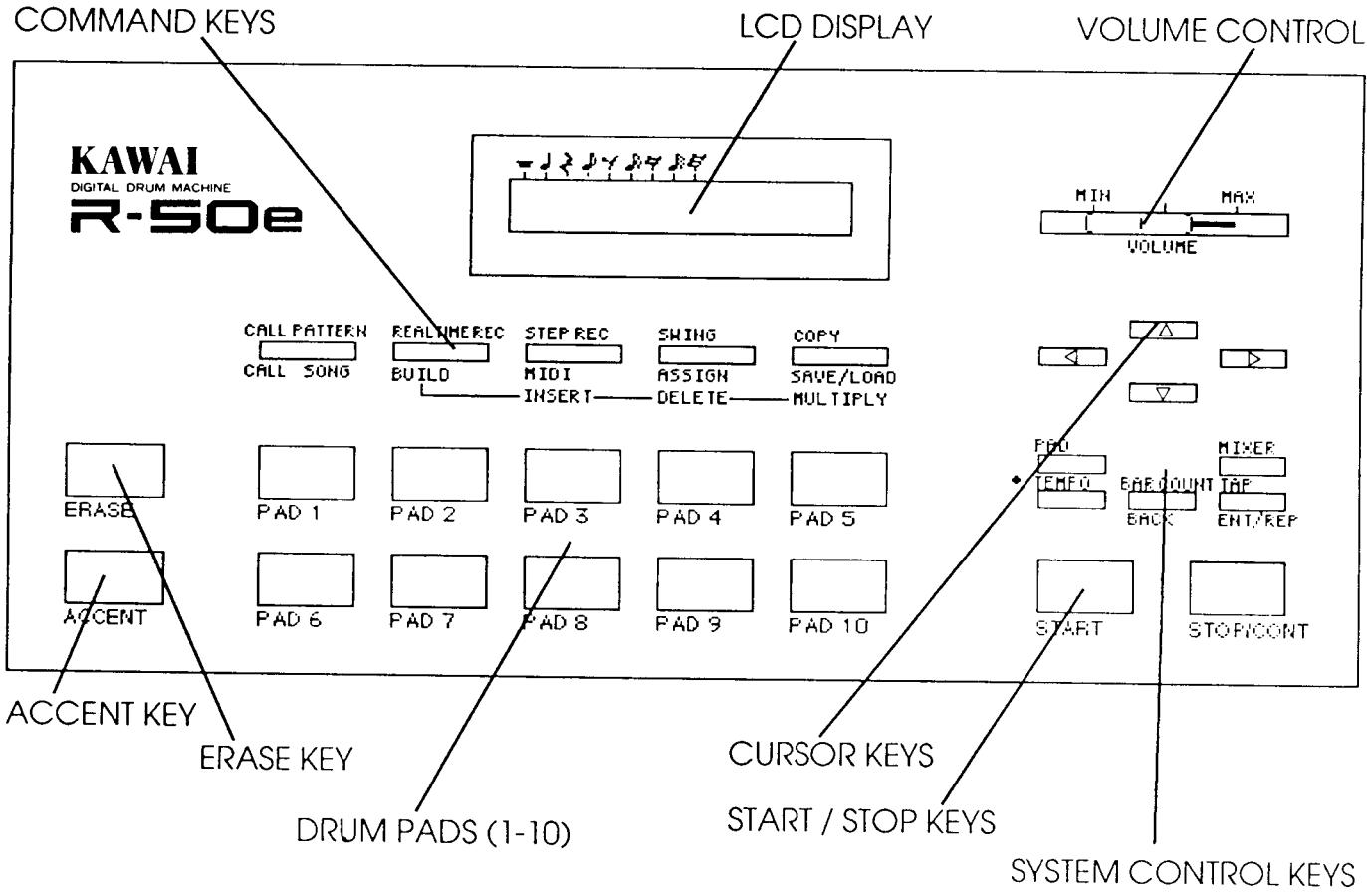
In the unlikely event of a "lock-up" due to line interference, simply turn the R-50e off for a few seconds and then turn it back on.

• REPAIRS

The R-50e should only be service by an authorized Kawai repair station. Always save your valuable internal data to a cassette tape or MIDI before taking the drum machine in for service, as the data may be erased during repair.

3. CONTROLS

FRONT PANEL

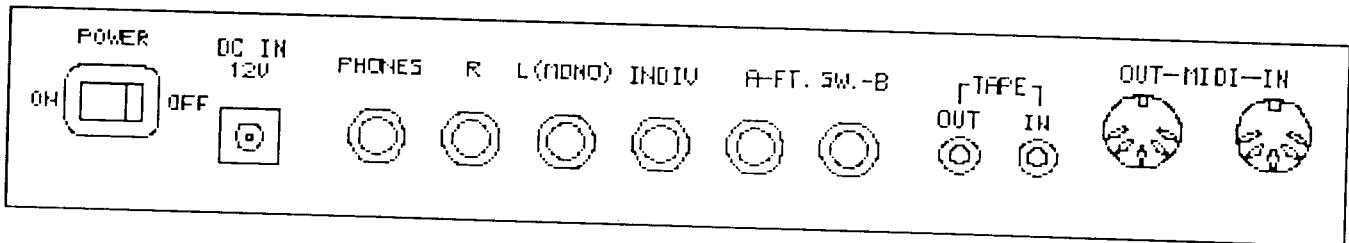


R-50e PRESET PATTERNS

(PATTERNS 50-99)

0	1	2	3	4	5	6	7	8	9
Elec. Pop 1 50	Elec. Pop 1 Fill In	Elec. Pop 2	Elec. Pop 2 Fill In	8 Beat 1	8 Beat 1 Fill In	Disco 1	Disco 1 Fill In	Elec. Pop 3	Elec. Pop 3 Fill In
Heavy Rock 60	Heavy Rock Fill In	Heavy Metal	Heavy Metal Fill In	8 Beat 2	8 Beat 2 Fill In	Disco 2	Disco 2 Fill In	Elec. Pop 4	Elec. Pop 4 Fill In
Count 70	16 Beat 1	16 Beat 1 Fill In 1	16 Beat 1 Fill In 2	16 Beat 2	16 Beat 2 Fill In	16 Beat 3	16 Beat 3 Fill In	16 Beat 4	16 Beat 4 Fill In
16 Beat 5 80	16 Beat 5 Fill In 1	16 Beat 5 Fill In 2	Ballad 1	Ballad 1 Fill In	Ballad 2	Ballad 2 Fill In	Disco 3	Disco 4	Disco 4 Fill In
Ballad 3 90	Ballad 3 Fill In	Echo	Shuffle 1	Shuffle 1 Fill In	Shuffle 2	Shuffle 2 Fill In	Shuffle 3	Shuffle 3 Fill In	Street Kids

REAR PANEL



- **POWER** - Main power ON/OFF switch
- **DC IN** - Connection for 12V 500mA power supply.
- **OUTPUTS**
The R-50e does not include a power amplifier or speaker. To hear the instrument you must use headphones or connect it to a sound system (preferably full-range).

PHONES

Connection for standard stereo headphones.

R

Connection for right portion of stereo output.

L (MONO)

Connection for left portion of stereo output. Also used as a mono output if stereo is not required.

INDIV.

Connection for the Individual Output channel to which any given drum can be assigned.

- **FT. SW. A**

Connection for first optional F-1 footswitch.
Footswitch functions are programmable.

- **FT. SW. B**

Connection for second optional F-1 footswitch.
Footswitch functions are programmable.

- **TAPE OUT**

For connection to cassette deck input for data storage.

- **TAPE IN**

For connection to cassette deck output for data retrieval.

- **MIDI IN/OUT**

Connection to external MIDI gear.

4. OVERVIEW

SOUNDS

The R-50e features the following 24 digital drum and tuned percussion sounds:

ELECTRONIC BASS DRUM	(BD1)
REVERB BASS DRUM	(BD2)
ACOUSTIC BASS DRUM	(BD3)
ELECTRONIC SNARE DRUM	(SD1)
REVERB SNARE DRUM	(SD2)
ACOUSTIC SNARE DRUM	(SD3)
GATED SNARE DRUM	(SD4)
RIM SHOT	(RIM)
ELECTRONIC TOM HIGH	(TOM1)
ELECTRONIC TOM MID	(TOM2)
ELECTRONIC TOM LOW	(TOM3)
REVERB TOM HIGH	(TOM4)
REVERB TOM LOW	(TOM5)
HI-HAT CLOSED	(HHCL)
HI-HAT OPEN	(HHOP)
CRASH CYMBAL	(CRSH)
HAND CLAPS	(CLAP)
CLICK	(CLIK)
FINGER SNAP	(SNAP)
NORMAL ELECTRIC BASS	(BAS1)
FUNK ELECTRIC BASS	(BAS2)
ORCHESTRA HIT 1	(HIT1)
ORCHESTRA HIT 2	(HIT2)
TIMPANI	(TIMP)

These instruments can be assigned to Pads 1-10 along with other parameters such as tunings, accent, panning, level and processing. Four pad set-ups are preset and eight combinations are user-definable.

Rhythm patterns can be recorded individually using any of the pads in memory and up to eight voices can sound simultaneously. Rhythm patterns can then be assembled into a song and individual songs can be linked together to automate entire sets.

PADS

The sounds in the current pad set-up or drum kit are played using the 10 pads labeled PAD 1 - PAD 10. Additional kits are accessed using the PAD key.

GETTING AROUND

Operations on the R-50e are fairly uniform. Please take a moment to familiarize yourself with standard communication with the R-50e.

Major command categories are engaged by pressing the correspondingly marked button. For keys with two commands, the lower command is accessed by pressing the key twice in succession. In either case, pressing the same button again exits the command category.

Additional commands are structured in a menu/sub-menu format and are accessed by pressing the ENT./REP. key successively for each command. In some instances, the BACK key can be used to move backward through a series of sub-menu choices. The ENT./REP. and BACK keys also serve as "Execute" and "Cancel" for certain operations.

CURSOR KEYS

The **◀** and **▶** keys are used to increment and decrement the value displayed in the window. The **▲** and **▼** keys change similar parameters in steps of +/-10. **▲** and **▼** also change certain other display attributes such as drum selection. The arrow keys repeat their functions when held down.

VOLUME

The VOLUME control serves as a master volume control for the entire instrument. Individual volumes are accessed via the MIXER.

5. WORKING WITH DRUM KITS

It is important to understand that pads and drums are independent of one another. A drum can be assigned to more than one pad at a time and the different pads can then be set for different variations in tuning, level and processing to facilitate easy and versatile entry of patterns.

Pressing PAD displays the current drum kit. The R-50e comes with 4 preset drum kits (PRE. 1-4) and 8 user-defined drum kits (USER 1-8). (The instrument comes out of the box with PRE. 1 assigned to the pads.) Play the 10 pads to hear each sound.

Pressing the **◀** and **▶** keys moves through PRE 1-4 (presets) and USER 1-8. Select each kit in turn and play the 10 pads.

CHANGING USER SETTINGS

While the presets cannot be altered, USER 1-8 are designed to be programmed to suit your needs. After selecting the appropriate USER drum kit, ENT./REP. accesses the next function and BACK returns you to the previous function. To exit PAD mode at any time press PAD again.

PAD	▼
DRUM	▼
LEVEL	▼
ACCENT	▼
TUNE	▼
PAN	▼
GATE	▼
DELAY	▼
FLANGE	▼

You can select a pad during any of these functions simply by hitting it. The pad number is displayed along with the appropriate information for the current function and the pads can be played while making changes.

CHANGING DRUMS

This is where drums are selected for the current pad (the one played last). Besides the 24 percussion and drum sounds, eight triggers are available which can be programmed to play external MIDI devices. Trigger parameters are set up under MIDI OUT.

Press ENT./REP. from the USER display. Press the **▲** and **▼** keys to change the drum assignment. The display will show the currently selected drum.

LEVEL

While the front-panel pads are not physically sensitive, they can be programmed to record notes into patterns at a specified velocity or volume.

Press ENT./REP. from the DRUMS display. Use the **◀** and **▶** keys to change the LEVEL assignment. The bar graph in the display represents the LEVEL setting.

EXAMPLE

Press PAD to enter PAD mode.

*PAD PRE. 1

Use **◀** and **▶** to select a kit.

*PAD USER1

Press ENT./REP. to get into the kit.

*PAD 1 TOM1

Play a pad to access settings for that pad.

*PAD 9 TOM4

Press **▲** and **▼** to change the assigned instrument.

*PAD 9 TOM5

Press ENT./REP. to access LEVEL.

*PAD 9 LVL. ■■

Use **◀** and **▶** to change the pad volume.

*PAD 9 LVL. ■

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ACCENT

Each pad can be given an accent level which is invoked when the ACCENT key is depressed in conjunction with the given pad. The ACCENT level can actually be higher or lower than the LEVEL setting.

Press ENT./REP. from the LEVEL display. Use the **◀** and **▶** keys to change the ACCENT level. The bar graph in the display represents the level.

TUNING

Each pad can be tuned -8/+7 semitones from the drum's original pitch. Several pads using the same drum could be tuned differently to create tuned percussion.

Press ENT./REP. from the ACCENT display. Use the **◀** and **▶** keys to change the tuning. The graph in the display increases as the pitch gets higher and decreases as the pitch gets lower.

8 bars represent original pitch.

PAN

Each pad can be positioned anywhere in the stereo field when both the LEFT and RIGHT outputs are used.

Press ENT./REP. from the TUNE display. Use the **◀** and **▶** keys to place the sound. The graph in the display indicates the left-to-right placement of the current pad.

8 bars represent center position.
(0~7: Left, 9~15: Right)

GATE

Gating refers to cutting off part of a sound. A popular recording technique today is to apply a gate to a reverbed drum sound to choke the reverb effect off abruptly.

Press ENT./REP. from the PAN display. Each pad can be given its own gate setting using the **◀** and **▶** keys to select GATE 1, GATE 2 or GATE 3. GATE 0 indicates no gating effect.

EXAMPLE (continued)

Press ENT./REP. to access ACCENT.

*PAD 9 AC. ■■

Use **◀** and **▶** to change the ACCENT setting.

*PAD 9 AC. ■

Press ENT./REP. to access TUNE.

*PAD 9 TUNE■

Change pad tuning using **◀** and **▶**.

*PAD 9 TUNE■■

Press ENT./REP. to access PAN.

*PAD 9 PAN ■

Use **◀** and **▶** to change pad panning.

*PAD 9 PAN ■■

Press ENT./REP. to access GATE.

*PAD 9 GATE 0

Use **◀** and **▶** to change the pad gate setting.

*PAD 9 GATE 1

(continued on next page)

DELAY

Digital delay effects can be used to fatten sounds and create slapback echo effects. The delay time is preset for each drum sound.

Press ENT./REP. from the GATE display. Each pad can be given its own digital delay effect using the **◀** and **▶** to select DELAY 1, DELAY 2 or DELAY 3. DELAY 0 indicates no delay effect.

DELAY 1: The delayed sound plays at the same volume as the original sound.

DELAY 2: The delayed sound plays louder than the original sound.

DELAY 3: The delayed sound plays softer than the original sound.

FLANGE

Flanging can be used as special effects to add an animated or "spacey" effect.

Press ENT./REP. from the DELAY display. Each pad can be given its own digital flange effect using the **◀** and **▶** to select FLANGE 1, FLANGE 2 or FLANGE 3. FLANGE 0 indicates no flange effect.

FLANGE 1: The delayed sound plays at the same pitch as the original sound.

FLANGE 2: The delayed sound plays at a higher pitch than the original sound.

FLANGE 3: The delayed sound plays at a lower pitch than the original sound.

To exit PAD mode, press PAD again.

Note: While DELAY and FLANGE can be set at a time, we recommend that one of them is turned off to obtain the best effect. When a drum is assigned to MONO mode (See p.37), DELAY and FLANGE have no effect on that drum.

EXAMPLE (continued)

Press ENT./REP. to access DELAY.

***PAD 9 DELAY0**

Use **◀** and **▶** to change the pad delay setting.

***PAD 9 DELAY1**

Press ENT./REP. to access FLANGE.

***PAD 9 FLANG0**

Use **◀** and **▶** to change the pad flange setting.

***PAD 9 FLANG1**

Press ENT./REP. to return to the beginning of PAD mode.

***PAD USER1**

Press PAD to exit PAD mode.

CALL PTN 49.

MIXER

The R-50 has a built-in mixer which governs the balance of individual drums, as opposed to the pads. (Remember drums are assigned to pads.)

Level controls are accessed by pressing MIXER. Pressing ENT./REP. successively accesses the other functions available and BACK returns you to the previous function:

You can use the mixer at any point while the drum machine is playing and you can also play the pads to monitor the changes you make in the mixer.

LEVEL

The LEVEL function provides for setting the level of the individual drums. If one drum is assigned to several pads, the volumes for all of those same pads will be changed.

If you are not in MIXER mode, press MIXER once to do so. Use the **◀** and **▶** keys to change the volume of the currently displayed drum. Press the **▲** and **▼** keys to change to the drum you wish to work with.

MANUAL PAN

The pads are normally given their panning assignments in the PAD sub-menu. It is possible to override those assignments with the ones set in this next MIXER function. If MANUAL PAN is OFF the panning set in PAD mode is in effect for all drums. If MANUAL PAN is ON, the panning set in MIXER mode is in effect for all drums.

Press ENT./REP. from the LEVEL function to access MANUAL PAN. Use the **◀** key to select MANUAL PAN OFF and the **▶** key to select MANUAL PAN ON.

PAN

If MANUAL PAN is ON, the pan settings here will override those set in the PAN mode. If MANUAL PAN is OFF, these settings will have no effect.

Press ENT./REP. from the MANUAL PAN function to access PAN. Use the **◀** and **▶** keys to change the panning. Press the **▲** and **▼** keys to change the drum being panned.

To exit the MIXER mode, press MIXER again.

Press the ENTER key to change functions:

→ LEVEL → MANUAL PAN → PAN

Note:

Press MIXER again to exit the MIXER menu at any time.

Press MIXER to access MIXER functions.

LEVEL CRSH ■

Use the **◀** and **▶** keys to change the volume.

*LEVEL CRSH ■

Press **▲** and **▼** to change drums.

*LEVEL HIT1 ■

Press ENT./REP. to access MANUAL PAN function.

*MANUAL PAN OFF

Use the **▶** to turn MANUAL PAN on.

*MANUAL PAN ON

Use the **◀** to turn MANUAL PAN off.

*MANUAL PAN OFF

Press ENT./REP. to access PAN function.

*PAN HIT1 ■

Use the **◀** and **▶** to change the panning.

*PAN HIT1 ■

Press ENT./REP. to return to the LEVEL function.

*LEVEL HIT1 ■

Press MIXER to exit MIXER mode.

CALL PTN 20

6. PLAYING RHYTHM PATTERNS

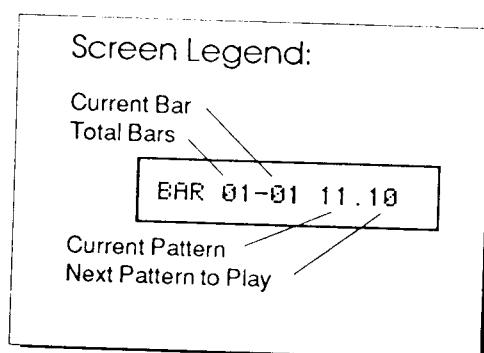
A rhythm "pattern" is a section of rhythm of a given length (such as 2 bars). The R-50e comes with 50 preset rhythm patterns (50-99) along with room for 50 user-defined patterns (00-49). These patterns are the building blocks of complete songs or a given pattern can just loop endlessly.

Existing patterns are accessed by pressing the CALL PATTERN button. The display will then show the current pattern number. The **◀** and **▶** keys decrement and increment and decrement the pattern number one digit at a time, while the **▲** and **▼** keys change the pattern number in increments of 10. (Remember, all four keys repeat their functions when held down).

Once a rhythm pattern is selected, press the START button to hear the pattern. When the end of the pattern is reached, the same pattern is repeated over and over. The red LED beside TEMPO flashes to indicate the downbeat. Press the STOP/CONT. button to stop the pattern. Once the machine has stopped playing, pressing the STOP/CONT. button again will start the pattern playing from the point where it was stopped.

Select and play a pattern. While the pattern is still playing, select a different pattern number with the arrow keys. Notice that the next time the first pattern reaches its end, the newly selected pattern begins.

At this point the display tells you several important things. The first number shows the length of the pattern in bars, while the second number represents the current bar position within the pattern. The third number is the current pattern number. When a new pattern has been selected during playback the fourth position changes from blank to the new pattern number.



You may find it handy to establish how many bars have been played since you pressed START or CONT. This is the BAR COUNT feature and is accessed by pressing BAR COUNT and successively TEMPO. BAR COUNT can be displayed whether a pattern is playing or not and is reset each time you press START.

Note that during playback, various other functions such as PAD and MIXER are available. Experiment with selecting and playing different patterns and adjusting the PAD and MIXER settings to taste during playback.

EXAMPLE

Press CALL PATTERN to access patterns.

CALL PTN 00.

Press **▶** to increment pattern number by 1.

CALL PTN 01.

Press **▲** to increment pattern number by 10.

CALL PTN 11.

Press START to hear the repeating pattern.

BAR 01-01 11.

Press **◀** while pattern is playing.

BAR 01-01 11.10

Press STOP/CONT. to end performance.

BAR 01-01 10.

Press STOP/CONT. again to continue performance.

BAR 01-01 10.

Press BAR and successively TEMPO to display BAR COUNT.

*BAR= 002

TEMPO

MANUAL TEMPO CONTROL

The tempo can be altered regardless of whether the machine is playing or stopped. Simply press TEMPO and the display shows the current tempo in beats-per-minute. The red LED beside TEMPO will also light to indicate TEMPO mode. The **◀** and **▶** keys are used to decrement and increment the tempo by a factor of 1, while the **▲** and **▼** keys change the tempo by a factor of 10.

TAP TEMPO

The R-50e's tempo can also be dictated by simply tapping a tempo in! First press TEMPO to enter TEMPO mode. Then simply tap a tempo using the TAP button. The R-50e measures the time between any two taps and alters the tempo accordingly. We recommend that you tap at least 4 beats to establish the desired tempo.

EXAMPLE

Press TEMPO to access TEMPO mode.

***TEMPO $\text{d}=120$**

Use **◀** and **▶** to change tempo by a factor of 1.
Press **▶**.

***TEMPO $\text{d}=121$**

Use **▲** and **▼** to change tempo by a factor of 10.
Press **▼**.

***TEMPO $\text{d}=111$**

Tap desired tempo using TAP.

***TEMPO $\text{d}=165$**

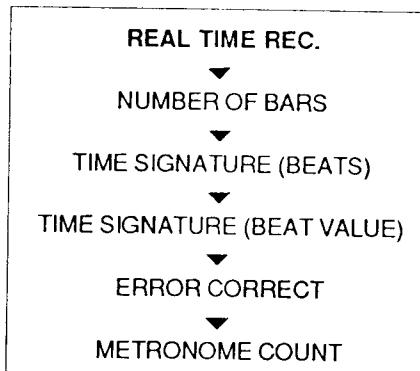
7. RECORDING RHYTHM PATTERNS

Preset patterns 50-99 cannot be altered. Patterns 00-49 can be programmed and altered by the user. Two basic methods can be used to enter new patterns - real-time and step. Real-time mode is used to enter drums parts in "live" against a metronome. Step mode is used to enter patterns one beat at a time without any reference to a real-time metronome.

REAL-TIME RECORDING

As stated earlier, real-time mode is used to enter drums parts in "live" against a metronome.

Press REAL TIME REC. to enter this mode. The ENT./REP. key is used to step through a series of set-up functions before actually recording and BACK is used to return to the previous function:



Note: You may exit from any of these functions by pressing REAL TIME REC.

NUMBER OF BARS

Each pattern can be any desired length up to 99 bars. The default is 1 bar, but is easily changed.

Press ENT./REP. from the REAL TIME REC. display. Use the **◀** and **▶** to change the number of bars by a factor of 1 and the **▲** and **▼** keys to change by a factor of 10.

TIME SIGNATURE

The time signature of an R-50e pattern is very flexible. Patterns are available from 1/4 to 99/16!

In both modes, the **◀** and **▶** keys change the pattern number by a factor of 1, while the **▲** and **▼** keys change by a factor of 10. If "DUB" appears as part of the display, a pattern has already been recorded. "NEW" represents a pattern that is has not been recorded. "PRE" indicates a preset pattern that cannot be altered.

Press ENT./REP. from the BAR display to access the number of beats per measure. The number of beats in a measure can range from 1 to 99. Use the **◀** and **▶** to change the number of beats by a factor of 1 and the **▲** and **▼** keys to change by a factor of 10.

Press ENT./REP. again to access the beat value of the time signature. Use the **◀** and **▶** keys to select quarter note, eighth note or sixteenth note beat value.

ERROR CORRECT

Error correct (also known as quantize) can be used to correct your performance while recording a pattern. All entries are rounded to the closest value that you specify.

Press ENT./REP. from the TIME SIGNATURE display. The default error-correct value is 1/16 (your recordings will be rounded to the nearest sixteenth note). Use the **◀** and **▶** keys to specify the desired error-correct value. (1/6 represents quarter-note triplets, 1/12 represents eighth-note triplets, 1/24 represents sixteenth note triplets and 1/48 represents thirty-second-note triplets.) If no error-correction is desired, select 1/96 (the record resolution of the R-50e is ninety-sixth-notes).

METRONOME

Real-time recording is typically done with the aid of an audible metronome. The beat value of the metronome can be altered to suit your needs.

Press ENT./REP. from the ERROR CORRECT display. Use the **◀** and **▶** keys to specify the desired metronome beat value. (1/6 represents quarter-note triplets, 1/12 represents eighth-note triplets and 1/24 represents sixteenth note triplets.) If no metronome is desired, select OFF.

RECORDING

Once the record parameters are set properly, you're ready to record. (If you like the default settings, you don't have to access any of these set-up functions before recording.)

From the metronome display, press either ENT./REP. or REAL TIME REC. to return to REAL TIME RECORD mode. Press START to begin recording and you should hear the metronome assuming you did not turn it off. (Note: If the metronome is too loud or too soft, the level of the metronome can be adjusted using MIXER.) The display will show the total number of bars with the current bar number to the right.

The pattern will play over and over again, with the downbeat indicated by the red LED and an accented metronome beat. This repetition allows you to take your time and enter one thing at a time.

Drums are recorded into a pattern by pressing the desired pad at the appropriate time. (External MIDI devices can also be used, covered under the MIDI OPERATION section.) All data associated with a given pad is recorded such as level, tuning and panning.

To enter accented drums, hold down the ACCENT key while playing the appropriate pad.

If ENT./REP. and a pad are held down while recording, the pad will be entered repeatedly on every beat specified by the ERROR CORRECT value. For instance, if ERROR CORRECT is set for 1/16 and ENT./REP. and a pad assigned to hi-hat are held down for half of a measure, the hi-hat will be recorded on every 1/16th note in that half measure.

All drum kits are available while recording by entering PAD mode and selecting the desired kit before continuing to play the pads. TEMPO and MIXER are also accessible while recording.

Note: A useful technique is to stop the recording process and change the error-correct value as needed for each pad. (The number of bars and time signature cannot be changed.) For example, you might want a snare hit quantized to 1/4 while the high hat has no error-correction at all.

EXAMPLE

Press REAL TIME REC.

REAL:DUB PTH 11

Press **◀** to decrement pattern number by 1.

REAL:DUB PTH 10

Press **▼** to decrement pattern number by 10.

REAL:NEW PTH 00

Press ENT./REP to access BARS.

BAR 01 04/04

Press **▶** to specify 2-bar pattern.

BAR 02 04/04

Press ENT./REP. to access BEATS.

BAR 02 04/04

Press **◀** to decrement BEATS to 3/4 time.

BAR 02 03/04

Press ENT./REP. to access BEAT VALUE.

BAR 02 03/04

Press **▶** to increment BEAT VALUE to 3/8 time.

BAR 02 03/08

Press ENT./REP. to access ERROR CORRECT.

E.C. 1/16 M 1/4

Press **◀** to change ERROR CORRECT to eighth-note triplets.

E.C. 1/12 M 1/4

Press ENT./REP. to access METRONOME BEAT.

E.C. 1/12 M 1/4

Press **▶** twice to set metronome for eighth notes.

E.C. 1/12 M 1/8

Press REAL TIME REC. to exit.

REAL:NEW PTH 00

Press START to begin recording. Enter drums using pads. (Access PAD and MIXER as needed. Press again to exit.)

BAR 02-01 -REC-

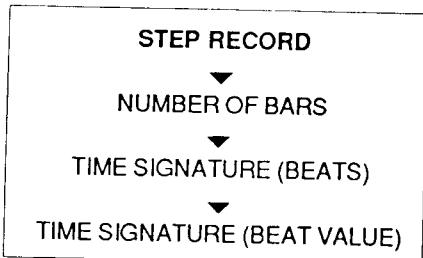
Press STOP to end.

REAL:DUB PTH 00

STEP RECORDING

Step recording is the process of manually stepping through the beats of a pattern and entering drum hits where desired.

Press STEP REC. to enter this mode. The ENT./REP. key is used to step through a series of set-up functions before actually recording and BACK is used to return to the previous function:



Note: You may exit any of these functions at any time by pressing STEP REC.

Note: For this example we assume that you have erased pattern 00.

NUMBER OF BARS

Each pattern can be any desired length up to 99 bars. The default is 1 bar, but is easily changed.

Press ENT./REP. from the STEP REC. display. Use the **◀** and **▶** to change the number of bars by a factor of 1 and the **▲** and **▼** keys to change by a factor of 10.

TIME SIGNATURE

The time signature of an R-50e pattern is very flexible. Patterns are available from 1/4 to 99/16!

Press ENT./REP. from the BAR display to access the number of beats per measure. The number of beats in a measure can range from 1 to 99. Use the **◀** and **▶** to change the number of beats by a factor of 1 and the **▲** and **▼** keys to change by a factor of 10.

Press ENT./REP. again to access the beat value of the time signature. Use the **◀** and **▶** keys to select quarter note, eighth note or sixteenth note beat value.

RECORDING

Once these parameters are set properly, you're ready to record. (If you like the default settings, you don't have to access any of these set-up functions before recording.) From the BEAT VALUE display, press either ENT./REP. or STEP REC. to return to STEP RECORD mode.

Pressing the START button gets the R-50e ready to accept the first beat. The red LED beside TEMPO will light to confirm that. Use the **◀** and **▶** keys to select the note value from those engraved on the display window. The **▲** and **▼** keys are used to change the value from normal (shown with **↑**) to triplets (shown as "3") and back. While "3" is displayed, press a pad three times to play a triplet of the selected value. Strike the desired pad to enter its sound at the selected value for that beat. Use PAD if necessary to select the proper sound. To enter accented drums, hold down the ACCENT key while playing the appropriate pad.

This same process is repeated to enter each beat of the pattern, with the display showing the number of bars with the current bar to the right. It is up to the user to keep track of what the current beat is within the bar. Example: If an eighth note was entered as the first beat, the next entry will appear on the next eighth note of the bar. If a quarter note was entered, the next beat will be placed on the next quarter note instead.

Rests are used to advance to subsequent beats without entering notes. After selecting a rest, play any pad to advance to the next beat. You should only hear a metronome click.

Rests can also be used to erase a drum previously recorded: Select the rest at the point in the pattern where the drum to be erased is recorded. Then, press the pad assigned to the same drum as you wish to erase. The ENT./REP. key can be used to advance by the selected note value.

After the last beat of the pattern has been entered the red LED lights again to show that the R-50e is ready to record another pass starting with the first beat. The STEP RECORD process can be repeated as many times as necessary to record all desired drums.

Pressing STOP/CONT. at any time exits the recording process.

To hear the pattern, you must exit STEP REC. mode. Select CALL PATTERN and press START.

EXAMPLE A: SET UP

Press STEP REC.

STEP : DUB PTN 11

Press **◀** to decrement pattern number by 1.

STEP : DUB PTN 10

Press **▼** to decrement pattern number by 10.

STEP : NEW PTN 00

Press ENT./REP to access BARS.

BAR 01 04/04

Press **▶** to specify 2-bar pattern.

BAR 02 04/04

Press ENT./REP. to access BEATS.

BAR 02 04/04

Press **◀** to decrement BEATS to 3/4 time.

BAR 02 03/04

Press ENT./REP. to access BEAT VALUE.

BAR 02 03/04

Press **▶** to increment BEAT VALUE to 3/8 time.

BAR 02 03/08

Press STEP REC. to exit.

STEP : NEW PTN 00

EXAMPLE B: RECORDING

Note: The following enters a simple bass/snare pattern. Select the PRE. 1 kit. Also use ERASE PATTERN to undo the changes made by Example A and return to a default of 4/4 time.

Press START.

↑ 01-01

Press **◀** twice to select quarter-note entry.

Play PAD 6 to enter a bass drum as quarter-note.

↑ 01-01

Press **▶** twice to select eighth-note entry.

Play PAD 7 to enter snare drum as eighth-note.

↑ 01-01

Play PAD 6 to enter bass drum as eighth-note.

↑ 01-01

Press **▶** to select eighth-note rest entry.

Press any pad to enter an eighth-note rest.

↑ 01-01

Press **◀** to select eighth-note entry.

Play PAD 7 to enter a snare drum as eighth-note.

Press STOP/CONT. to exit.

Press CALL PATTERN to access pattern playback.

CALL PTN 00.

Press START to hear pattern.

BAR 01-01 00. -

8. EDITING RHYTHM PATTERNS

OVERDUB RECORDING

Overdubs are done in the same way that patterns are recorded, using either REAL TIME REC. or STEP REC. The only difference is that the display will read "DUB" instead of "NEW". Each pass can be done using a different error-correction, metronome count and drum kit if desired. Remember that the number of bars and time signature cannot be changed in an already recorded pattern.

OVERDUBBING PRESET PATTERNS

Overdubbing using a preset pattern is an easy way to create new patterns. Overdubbing using a preset pattern causes the creation of a new pattern, which is automatically saved in a blank pattern within the pattern area 00-49.

If the patterns 00-49 are all recorded, the display shows the error message "USER AREA OVER".

ERASING

ERASING A PATTERN

User-definable patterns 00-49 can be erased easily. (Preset patterns 50-99 are permanently stored in the machine.) Simply select the pattern you wish to erase and press ERASE. Press ENT./REP. to confirm or BACK to cancel.

EXAMPLE:

Select the pattern to be erased. Select Pattern 05.

Press ERASE.

Press ENT./REP. to verify.

Or, press BACK to cancel erasure.

CALL PTN 05.

ERASE PTN 05 ALL

ERASE EXECUTED

ERASE CANCEL

ERASING AN INSTRUMENT

It may be desirable to erase all occurrences of an instrument in a given pattern. This is easily accomplished.

Make sure the pattern you wish to erase is selected, then press ERASE. As with the ERASE PATTERN operation, the display will show the pattern number and is prepared to erase "ALL" drums. Use the \blacktriangle and \blacktriangledown keys to select the drum you wish to erase. Then press ENT./REP. to proceed or press BACK to cancel the operation.

Note: This operation erases all events in a pattern which uses a given drum. If different entries have been made with pads using different variations on that drum, all those events will be erased. You are erasing a drum, not a pad!

EXAMPLE:

Press ERASE.

Use \blacktriangle and \blacktriangledown to select drum.

Press ENT./REP. to execute.

Or, press BACK to cancel.

ERASE PTN 05 ALL

ERASE PTN 05 B01

ERASE EXECUTED

ERASE CANCEL

ERASING A BAR

It is possible to erase all the contents of a single bar without disturbing the rest of the pattern.

Select CALL PATTERN and access the desired pattern using the 4 arrow keys. Press ENT./REP. to view the number of bars and the current bar. Select the desired bar using the **◀** and **▶** keys. (Alternately play the pattern, press STOP/CONT. during the bar you wish to erase, then press ENT./REP.) Press ERASE, then ENT./REP. to execute or BACK to cancel.

EXAMPLE:

Select the pattern.

CALL PTH 07.

Press ENT./REP. to access bar display.

BAR 02-01 07.

Use **◀** and **▶** to select bar to erase.

BAR 02-02 07.

Press ERASE.

ERASE BAR 02-02

Press ENT./REP. to continue.

ERASE EXECUTED

Or press BACK to cancel.

ERASE CANCEL

ERASING A NOTE

Rather than erase all occurrences of an instrument completely from a pattern, it may be desirable to erase a single note. This is done in REAL TIME RECORDING mode. Press REAL TIME REC. and access the desired pattern. Press START to start recording and held down ERASE. At the note you wish to erase, press the pad of the instrument to be erased.

Note: Erasure is executed as long as both ERASE and a pad are held down.

EXAMPLE:

Press REAL TIME REC.

REAL:DUB PTH 33

Select pattern using arrow keys.

REAL:DUB PTH 34

Start recording by pressing START.

BAR 01-01 -REC-

While holding ERASE, hold down pad to erase. Release.

BAR 01-01 -REC-

Press STOP/CONT.

REAL:DUB PTH 34

ERASING ALL MEMORY

You can erase all of the patterns in memory (except the preset ones of course), by holding the ACCENT key and then pressing the ERASE key. Press ENT./REP. to continue and press again to execute. Or press BACK to cancel.

EXAMPLE:

Hold ACCENT and press ERASE.

ERASE ALL MEMORY

Press ENT./REP. to continue.

ERASE SURE?

Press ENT./REP. to execute.

ERASE EXECUTED

Or, press BACK to cancel.

ERASE CANCEL

SWING

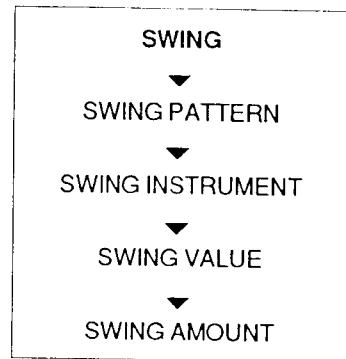
One way to make a drum pattern sound more human is to give it some "feel". Many drummers actually play behind the beat in attaining drum parts. The SWING feature of the R-50e makes it easy to create this same effect after a pattern has been recorded.

Press SWING to access SWING mode. Pressing ENT./REP. repeatedly accesses additional SWING parameters and BACK returns to the previous one. Press SWING at any time to exit SWING mode.

SELECT SWING PATTERN AND INSTRUMENT

This function allows you to select which pattern and which instrument will be effected by SWING.

Use the 4 arrow keys to access the appropriate pattern. Press ENT./REP. from the SWING PATTERN display. This prompt allows you to select the drum that will receive the swing effect. The default, "ALL", selects every instrument. Use the \blacktriangle and \blacktriangledown keys to select the appropriate drum.



SELECT SWING VALUE

The R-50e allows SWING to be assigned to notes which fall on eighth notes or sixteenth notes.

Press ENT./REP. from the SWING INSTRUMENT display. Use the \blacktriangle and \blacktriangledown keys to change between 1/8 and 1/16.

EXAMPLE:

Press SWING to enter SWING mode.

SWING PTN 00

Press \blacktriangleright to raise pattern.

SWING PTN 01

Press ENT./REP.

ALL 1/8 50%

Press \blacktriangle to select drum.

BD1 1/8 50%

Press ENT./REP.

BD1 1/8 50%

Press \blacktriangleright to select swing value.

BD1 1/16 50%

Press ENT./REP.

BD1 1/16 50%

Press \blacktriangleright to select swing factor.

BD1 1/16 50%

Press ENT./REP.

SWING READY

Press ENT./REP. again to execute.

CALL PTN 01.

Or, press BACK to cancel.

SWING CANCEL

SELECT SWING AMOUNT

The amount of swing can be specified as a percentage. The default is 50%, which is no swing. The maximum is 75%.

Press ENT./REP. from the SWING VALUE parameter. Use the \blacktriangle and \blacktriangledown keys to select the desired swing factor.

EXECUTE SWING

Press ENT./REP. from the SWING AMOUNT parameter. Press ENT./REP. again to continue or press BACK to cancel.

Warning: Once executed, the effects of SWING cannot be reversed. Making a copy of the pattern before using SWING is recommended (see next section).

Note: When the SWING VALUE is 1/16, the SWING AMOUNT cannot be 54%, 63%, or 71%. This combination will result in the error message "ILLEGAL INPUT." Also, if the pattern selected for SWING is blank, the error message "EMPTY PATTERN" will appear.

COPYING PATTERNS

It is often desirable to copy an existing pattern. For instance, you may want to create a pattern that is similar to an existing one by copying it and making slight changes (without changing the original). Also, copy is a nice safety factor when doing irrevocable operations like SWING.

The COPY command works on the principal of copying an existing source pattern to a destination pattern number. The current contents of the destination pattern will be erased. COPY can optionally be used to copy two different patterns end-on-end to a single new pattern. If the two source pattern numbers are the same, the resulting copy will be twice as long.

Press COPY to access COPY mode. Select the first pattern to be copied using the arrow keys. Press ENT./REP. Next, use the arrow keys again to select the optional second source copy. Press ENT./REP. (Leave this blank if you only wish to copy a single pattern.) Finally, select the destination pattern using the now-familiar arrow keys.

To change any of the copy values, press BACK to move to the previous parameters. Use the ERASE key to clear the entries, if necessary. When all is ready, press ENT./REP. again. Press ENT/REP a final time to continue or press BACK to cancel.

Note: To exit COPY mode at any time, press COPY again.

EXAMPLE:

Press COPY. Use arrow keys to select pattern to copy.

COPY ***=**

Press ENT./REP and use arrow keys to select optional second pattern to copy.

COPY 01+**=**

Press ENT./REP. and use arrow keys to select copy destination.

COPY 01+04=**

COPY 01+04=32

Press ENT./REP.

COPY READY

Press ENT./REP. to execute the copy.

CALL PTH 37.

Or, press BACK to cancel.

COPY CANCEL

ERROR MESSAGES

"ILLEGAL INPUT" will be displayed when the beat value of the second pattern is different than the first pattern, or if the patterns' combined number of bars is more than 99.

"MEMORY OVERFLOW" will appear if there is not enough memory to accept the copied pattern.

9. SONGS

BUILDING SONGS

Songs are constructed by assembling a list of existing patterns. This list can then be edited to insert or delete specific sections. Ten such songs can be created. It is also possible to link these songs themselves together.

Press BUILD SONG (touch REAL TIME REC. twice) to enter this mode.

The ENT./REP. key is used to move through the song-building functions and BACK returns to the previous step. Pressing BUILD SONG at any time exits the BUILD SONG mode.

SELECT SONG TO BUILD

Use **◀** and **▶** to select one of the ten songs.

SONG TEMPO

Since different songs have different tempos, it's often desirable to program the tempo right into the song.

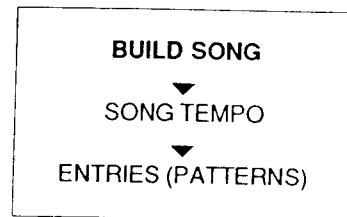
Press ENT./REP. from the SELECT SONG display. The tempo control is switched off as a default. Use the 4 arrow keys to change the tempo within the range of 40 - 250.

SONG CONSTRUCTION

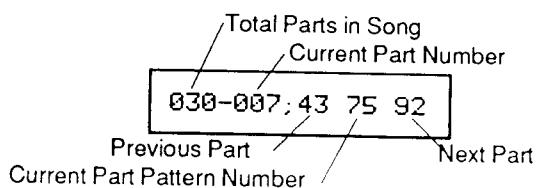
Press ENT./REP. from the SONG TEMPO display. The display then shows the number of patterns followed by the current pattern position within the song. The rest of the display is a small window on a list of patterns in the order in which they will play.

Use the 4 arrow keys to select the pattern which you wish to play first, then press ENT./REP. The list moves to the left to allow entry of the next pattern. Pressing any arrow key enters a default pattern number matching the previous pattern to make entering multiples of the same pattern easier. Use the arrow keys again to select the desired pattern and press ENT./REP. Repeat this process to enter all the patterns in the desired order.

Pressing BACK will return to the previous step which can then be changed. ("st" indicates the start of the song.) When all patterns have been positioned, press BUILD to exit.



Song Mode Screen Legend:



EXAMPLE:

Press BUILD.

BUILD SONG 0

Select Song 0 - 9 using the **◀** and **▶** keys.

BUILD SONG 5

Press ENT./REP. to access song tempo.

BUILD **d=OFF**

Use the arrow keys to change song tempo.

BUILD **d=120**

Press ENT./REP. to access the pattern list.

001-001; st ****** ******

Choose first pattern using arrow keys.

001-001; st **51** ******

Press ENT./REP. to advance the list.

002-002; **51** ****** ******

Choose next pattern using arrow keys.

002-002; **51** **33** ******

(continued)

BUILDING TOOLS – INSERT, DELETE AND MULTIPLY

Three additional functions speed up the song-building process - INSERT, DELETE and MULTIPLY. They are accessed by the right three buttons above the pads.

INSERTING PATTERNS IN A SONG

It is often necessary when constructing an arrangement to insert patterns into a song at various points, even though the basic song has already been defined.

Use the ENT./REP. and BACK keys to move the cursor to the pattern you wish to insert in front of. Press INSERT. The patterns from the original cursor position and beyond will shift to the right to open a position in the arrangement. The left portion of the display will increase to reflect the new additions to the arrangement. Then use the arrow keys as usual to select the pattern for the newly created position.

DELETING SECTIONS OF A SONG

While building a song, DELETE removes a range of patterns from the song list. All remaining song patterns are shifted ahead to close the gap.

Select the first pattern to delete using the ENT./REP. and BACK keys, then press DELETE. The pattern to be deleted is then outlined in the display. If any subsequent patterns are also to be deleted, use the ENT./REP. key to expand the delete range and the BACK key to narrow it, or cancel the DELETE function.

When the delete range has been set properly, press DELETE again. Then press ENT./REP. to continue and the left portion of the display will change to reflect fewer patterns in the song. To cancel the deletion process, press BACK.

MULTIPLY

Songs often end with repeated sections or vamps. The MULTIPLY function specifies the number of repetitions and all the patterns from the current one to the end of the song are inserted that number of times.

While in BUILD mode, use the ENT./REP. and BACK keys to move the cursor to the beginning point of the vamp and press MULTIPLY (same as COPY). Use the \blacktriangleleft and \triangleright keys to select number of repeats. Press ENT./REP. if you wish to continue, or press BACK to cancel. The left portion of the display will increase to reflect the new additions to the arrangement.

EXAMPLE (continued)

Press INSERT to insert a pattern at the cursor.

003-002;51 ■■ 33

Select insert pattern using arrow keys.

003-002;51 10 33

Select beginning of delete range using the ENT./REP. and BACK keys.

003-002;51 10 33

Press DELETE.

003-002;51<10>33

Use ENT./REP. and BACK to change the delete range.

003-003;<10 33>**

Press DELETE to continue.

DELETE READY

Press ENT./REP. again to confirm.

002-002;51 ** **

Or, press BACK to CANCEL.

DELETE CANCEL

Select beginning of vamp using the ENT./REP. and BACK keys.

003-002;44 01 02

Press MULTIPLY.

003-001;44<01 02

Use \blacktriangleleft and \triangleright to select number of repeats.

003-003;44<01 02

Press ENT./REP. to perform entry.

008-008;02 ** **

Or, press BACK to cancel.

003-002;44 01 02

(continued)

Note: Up to 99 repetitions can be selected using the Multiply function. However, the total number of parts within a song is limited to 255. Attempting to create a Song of more than 255 parts will result in the error message "ILLEGAL INPUT."

LINKING SONGS

Once songs have been defined, it is possible to chain them together so that one plays after another. This might be used to link several short songs together or to automate a set in live performance. (For the latter application, measures of rests and/or count-offs could be programmed into the beginning of each song if necessary.)

While in BUILD mode, move to the end of the song using ENT./REP.

The display will show "END". The **◀** and **▶** keys are used to select the song (0 - 9) to be played after the current song. Exit using BUILD or ENT./REP.

If a song is set to "END", the play will be finished at the end of the song.

EXAMPLE (continued)

To link songs, move to the end of the current song with ENT./REP.

SONG 5 END

Select the song to be played next using the **◀** and **▶** keys.

SONG 5 LINK2

Press BUILD to execute and return to song selection level.

BUILD SONG 5

Press BUILD again to exit BUILD mode.

REAL:DUB PTN 00

LINK

EXAMPLE A

If you set SONG 5 to LINK 5, the song will play repeatedly until STOP key is pressed.

SONG 5 LINK5

→ SONG 5
REPEAT

EXAMPLE B

If you link SONG 2 to SONG 3 and set SONG 3 to END, SONG 2 and SONG 3 will play successively and then will stop.

SONG 2 LINK2

SONG 3 END

SONG 1 → SONG 3 (END)

EXAMPLE C

If you set SONG 1 to LINK 2, SONG 2 to LINK 1 and SONG 3 to LINK 2, SONG 3, 2 and 1 will play successively.

SONG 1 LINK2

SONG 2 LINK1

SONG 3 LINK2

SONG 3 → SONG 2 → SONG 1
REPEAT

PLAYING SONGS

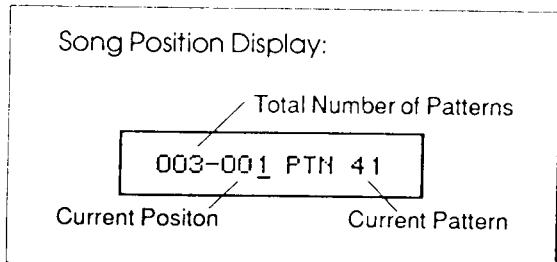
To hear a song after it has been constructed, first press CALL SONG (same as pressing CALL PATTERN twice). Select the desired song number using the **◀** and **▶** keys.

Press START to hear the song play. Press STOP/CONT. to stop playback. While playback is stopped, pressing STOP/CONT. again continues playback from where it stopped.

If the song has been programmed with a default tempo, that tempo will take effect. Whether a tempo was programmed or not, TEMPO can be accessed at any time and the arrow keys can be used to change the tempo.

START AT A DESIGNATED SECTION

It is also possible to start playback at the beginning of a specific section. Press ENT./REP. to access this mode. The display shows the number of patterns in the songs, followed by the current position and current pattern number:



Select the desired pattern using the arrow keys, then press CONT. The song will play from the beginning of that pattern. (If you press START, the Song will play from the beginning of the *first* pattern.)

BAR COUNT

It is often convenient to know how many bars into a song you are. BAR COUNT operates here the same way it does when using CALL PATTERN.

Press TEMPO and then BAR COUNT (same as BACK here) to display the number of bars. (The R-50e can either be playing or stopped.) This displays the actual number of measures that have gone by rather than the number of patterns, as a pattern can be more than one measure long. Press START, CONT. (if the R-50e is stopped), or TEMPO to exit.

EXAMPLE:

Press CALL SONG to access songs.

CALL SONG 5

Use **◀** and **▶** to select appropriate song.

CALL SONG 9

Press START to begin playback.

018-001 PTH 05

Press STOP to end.

018-007 SONG 09

Press ENT./REP. to access position to play from.

018-009 PTH 23

Use **◀** and **▶** to select starting position.

018-003 PTH 66

Press CONT. to begin playback from the selected position.

018-003 PTH 66

Press TEMPO and successively BAR COUNT to display BAR COUNT.

*BAR= 006

Press TEMPO to exit BAR COUNT.

018-003 PTH 66

Press STOP to return to song selection mode.

018-003 SONG 9

Press CALL SONG twice to exit CALL SONG mode.

CALL PTH 02.

ERASING SONGS

Erasing a song deletes the tempo, links and the entire list of patterns (but not the patterns themselves).

Press CALL SONG or BUILD and select the song to be erased using **◀** and **▶**. Then press ERASE. Press ENT./REP. to continue or press BACK to cancel.

EXAMPLE:

Press CALL PATTERN.

CALL	SONG 5
------	--------

Select song to erase using
◀ and **▶**.

CALL	SONG 8
------	--------

Press ERASE.

ERASE	SONG 8
-------	--------

Press ENT./REP. to
confirm.

ERASE EXECUTED

Or, press BACK to cancel.

ERASE CANCEL

ERASE ALL SONGS

This procedure deletes the contents of all ten songs.

Press CALL SONG or BUILD. Hold down ACCENT and press ERASE. Then press ENT./REP. to continue. You will receive a second prompt. Press ENT./REP. again to confirm. Press BACK instead to cancel.

EXAMPLE:

Press CALL SONG.

CALL	SONG 0
------	--------

Hold ACCENT and press
ERASE.

ERASE ALL SONG

Press ENT./REP. to
continue.

ERASE SURE?

Press ENT./REP. to
confirm.

ERASE EXECUTED

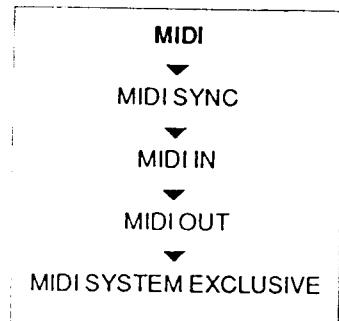
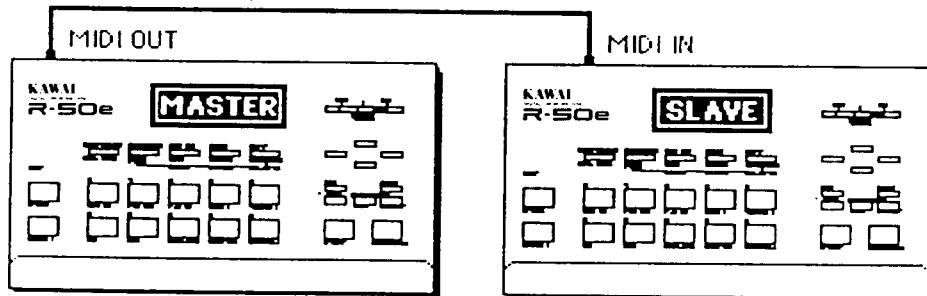
Or, press BACK to cancel.

ERASE CANCEL

10. MIDI

MIDI is fully implemented on the R-50e. MIDI operations are accessed by pressing MIDI (push STEP REC. twice). The **◀** and **▶** keys are used to access various sub-menus. After selecting the desired function, press ENT./REP. to access it.

MIDI Hookup:



MIDI SYNC

MIDI devices can be synchronized using MIDI Clock, part of the MIDI code that can be sent across standard MIDI cables. The R-50e can send or receive MIDI clock, allowing the machine to act as a master or a slave.

After pressing MIDI, use the **◀** and **▶** keys to select MIDI SYNC. Press ENT/REP. to enter the MIDI SYNC function. Use the **◀** and **▶** keys to select between SYNC EXT and SYNC INT. Press ENT/REP. to exit to the previous command level.

The sync default is SYNC INT, enabling the R-50e to be a master clock source. To use the R-50e as a master, connect the MIDI Out on the R-50e to the MIDI In of the slave device. To use the R-50e as a slave, connect the MIDI Out of the master device to the MIDI IN of the R-50e.

The slave unit will need to be set to SYNC EXT. In this mode, pressing START will not begin pattern or song playback because the unit is waiting for a clock from a device such as a sequencer or other drum machine.

EXAMPLE:

Press MIDI to enter MIDI mode.

Press ENT./REP. to select
MIDI SYNC.

Use **◀** and **▶** to switch between internal and external sync.

Press MIDI to return to previous level.

Press MIDI again to exit.

MIDI SYNC

SYNC INT

SVNC EXT

MIDI SYNC

STEP : DUB PTN 00

VELOCITY

Many controllers send velocity information - the dynamics of how hard the instrument was struck. While the pads on the R-50e are not velocity-sensitive, the R-50e can receive MIDI velocity and tailor the sound accordingly. If velocity is filtered out, the drums play at a moderate volume. Other MIDI information such as program changes are still received.

Press ENT./REP. from the KEY INFO display. Use the **◀** and **▶** keys to turn VELOCITY ON and OFF.

VOLUME

Some MIDI devices are capable of sending controller codes to change the volume on remote instruments. (MIDI Controller 7 is typically used for this.) If VOLUME is OFF, other MIDI information such as note values are still received.

Press ENT./REP. from the VELOCITY display. Use the **◀** and **▶** keys to turn VOLUME ON and OFF.

PROGRAM CHANGES

Most MIDI devices send program change information. This function can be used to filter out program changes coming from an instrument or a sequencer.

Press ENT./REP. from the VOLUME display. Use the **◀** and **▶** keys to turn PROGRAM ON and OFF.

START/STOP

Many MIDI devices like sequencers and drum machines send start and stop signals to engage and disengage MIDI clock. This function can be used to filter out start and stop information coming from an external device.

Press ENT./REP. from the PROGRAM display. Use the **◀** and **▶** keys to turn START/STOP ON and OFF.

EXAMPLE: (Continued)

Press ENT./REP. to access VELOCITY.

VELOCITY	ON
----------	----

Use **◀** and **▶** to turn velocity information on and off.

VELOCITY	OFF
----------	-----

Press ENT./REP. to access VOLUME.

VOLUME	ON
--------	----

Use **◀** and **▶** to turn volume controller information on and off.

VOLUME	OFF
--------	-----

Press ENT./REP. to access PROGRAM.

PROGRAM	ON
---------	----

Use **◀** and **▶** to turn program change information on and off.

PROGRAM	OFF
---------	-----

Press ENT./REP. to access START/STOP.

START/STOP	ON
------------	----

Use **◀** and **▶** to turn START/STOP on and off.

START/STOP	OFF
------------	-----

Press ENT./REP. to access NOTE ASSIGN display.

IN	0	****
----	---	------

Play the desired note on the master or use the 4 arrow keys to select the note being assigned.

IN	36	E01
----	----	-----

Press the desired pad, using PAD if necessary.

IN	36	S01
----	----	-----

Press ENT./REP. to return to previous level.

MIDI	IN
------	----

Press MIDI to exit MIDI mode.

STEP:DUB PTN	00
--------------	----

MIDI NOTE ASSIGNMENTS

Every MIDI controller such as a keyboard sends a unique note number when a key is depressed. It is possible to "map" the individual pads to specific keys or note numbers on the master controller. Tuned percussion can easily be attained by tuning drum sounds differently on several pads, then assigning those pads to a range of notes.

The default note assignments are shown on page 45. To change them, press ENT./REP. from the START/STOP display. The 4 arrow keys are used to select the note number. The note number can also be selected by pressing the desired key on the master.

Press the desired pad to assign it to the selected note. Use PAD if necessary to change drum kits. Repeat this process to assign appropriate pads to notes sent from the master device.

Press MIDI or ENT./REP. to return to basic MIDI functions. Press MIDI again to exit MIDI mode.

The note assignments can be reset to their default settings by holding ERASE while turning on the power.

Note: KEY INFO must be ON in order for NOTE ASSIGNMENTS to be useful.

INITIAL RESET

Pressing ERASE while turning on the power returns the following functions to their default settings. The rhythms in memory are not affected by this procedure.

1. PAD SETTINGS (USER)
2. MIDI IN NOTE ASSIGNMENTS
3. MIDI OUT NOTE ASSIGNMENTS
4. MIXER SETTINGS
5. ASSIGN SETTINGS
6. TRIGGER SETTINGS

MIDI OUT

The R-50e can also be used to send MIDI information to other MIDI devices such as keyboards, sequencers and samplers. Connect the R-50e's MIDI Out to the MIDI In of the slave unit as shown on page 26.

After pressing MIDI, use the **◀** and **▶** keys to select MIDI OUT and press ENT/REP. A sub-menu of functions is available by pressing ENT/REP. and BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

POLY/MONO MODE

The R-50e normally sends all MIDI information on one user-selected channel - referred to as Poly Mode. In Mono Mode, each drum can be sent on an independent MIDI channel!

Press ENT./REP. from the MIDI OUT display. Use the **◀** and **▶** keys to switch between POLY and MONO.

SEND CHANNEL

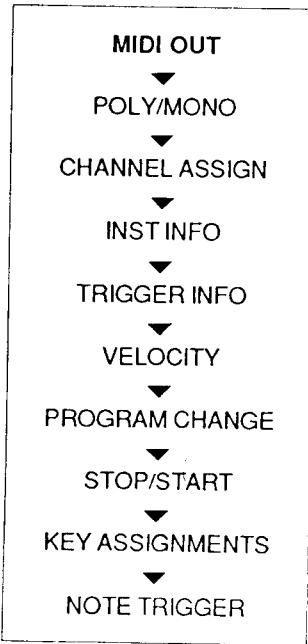
The R-50e can send and receive on different MIDI channels. This function selects the channel on which the R-50e will send MIDI information.

Press ENT/REP. from the POLY/MONO display. The **◀** and **▶** are used to select the MIDI channel. In Mono Mode, the various drums are accessed with the **▲** and **▼** keys and each drum is assigned to a MIDI channel.

INSTRUMENT INFO

This setting determines if the R-50e will send information of MIDI notes on transmission. Other MIDI information such as volume and program changes are still sent.

Press ENT./REP. from the CHANNEL display. Use ▲ and ▼ to turn INST INFO ON or OFF.



EXAMPLE:

Press MIDI.

Use ◀ and ▶ to select
MIDI OUT.

Press ENT./REP. to access
POLY/MONO mode

Use **◀** and **▶** to select
POLY or MONO

Press ENT./REP. to access
MIDI channel

Use **◀** and **▶** to select
MIDI channel

IN Mono Mode, use **▲** and **▼** to select different display.

Press ENT./REP. to access
INST INFO

Use **◀** and **▶** to turn instrument information on and off.

TRIGGER INFO

This function determines if the 8 MIDI trigger notes will be sent to slave devices.

Press ENT./REP. from the INSTRUMENT INFO display. Use the **◀** and **▶** keys to turn trigger information on and off.

VELOCITY

The R-50e can send velocity information - the dynamics of how hard the instrument was struck. If velocity is not filtered, the velocity of the associated pad will be sent. (This is defined using PAD.) If velocity is filtered out, the events are sent at a moderate velocity. Other MIDI information such as program changes are still sent.

Press ENT./REP. from the TRIGGER INFO display. Use the **◀** and **▶** keys to turn VELOCITY ON and OFF.

PROGRAM CHANGE

The R-50e normally sends program change information to other MIDI devices when a pattern or song is changed. This function can be used to filter out program changes going to an instrument or sequencer. Other information like notes and velocity are still sent.

Press ENT./REP. from the VOLUME display. Use the **◀** and **▶** keys to turn PROGRAM ON and OFF.

START/STOP

This function determines if the R-50e will send start and stop commands to control the MIDI clock of a slave device.

Press ENT./REP. from the PROGRAM CHANGE display. Use the **◀** and **▶** keys to turn start/stop information on or off.

EXAMPLE: (continued)

Press ENT./REP. to access TRIGGER INFO.

TRG INFO	ON
----------	----

Use **◀** and **▶** to turn trigger information on and off.

TRG INFO	OFF
----------	-----

Press ENT./REP. to access VELOCITY.

VELOCITY	ON
----------	----

Use **◀** and **▶** to turn velocity information on and off.

VELOCITY	OFF
----------	-----

Press ENT./REP. to access PROGRAM.

PROGRAM	ON
---------	----

Use **◀** and **▶** to turn program change information on and off.

PROGRAM	OFF
---------	-----

Press ENT./REP. to access START/STOP.

START/STOP	OFF
------------	-----

Use **◀** and **▶** to turn start/stop information on and off.

START/STOP	ON
------------	----

MIDI NOTE ASSIGNMENTS

MIDI devices such as keyboards play specific notes when they receive the analogous MIDI value. It is possible to "map" the individual pads to specific keys or note numbers on the slave device.

The default settings are shown on page 45. To change them, press ENT./REP. from the START/STOP display. The **◀** and **▶** keys are used to select the note number. The drums sounds are selected using the **▲** and **▼** keys. Repeat this process to assign appropriate pads to notes sent from the master device.

Note: INST INFO must be ON in order for NOTE ASSIGNMENTS to have effect.

NOTE TRIGGER

Triggers 1 - 8 can not only be programmed to send a given note on a given MIDI channel, but the duration of the trigger can be specified. (This is the equivalent of how long the key is held down - useful when triggering sound effects from synthesizers.)

Press ENT./REP. from the NOTE ASSIGN display. Select the current trigger number using the **▲** and **▼** keys. Select the trigger length (1/1 - 1/32) with the **◀** and **▶** keys.

Press MIDI or ENT./REP. to return to basic MIDI functions. Press MIDI again to exit MIDI mode.

EXAMPLE: (Continued)

Press ENT./REP. to access NOTE ASSIGN display.

OUT	BD1	38
-----	-----	----

Use the **◀** and **▶** keys to select the note being assigned.

OUT	BD1	36
-----	-----	----

Use **▲** and **▼** to select the desired drum.

OUT	SD1	32
-----	-----	----

Press ENT./REP. to access NOTE VALUE.

OUT	TRIG1	1/8
-----	-------	-----

Use **◀** and **▶** to select the duration.

OUT	TRIG1	1/16
-----	-------	------

Use **▲** and **▼** to select the desired trigger.

OUT	TRIG8	1/8
-----	-------	-----

Press ENT./REP. to return to previous menu level.

MIDI	OUT	
------	-----	--

Press MIDI to exit MIDI mode.

STEP:DUB PTN	00	
--------------	----	--

MIDI SYSTEM-EXCLUSIVE

System-exclusive information is used to communicate the unique functions of an instrument through MIDI rather than the generic note and controller information common to all MIDI devices. Using system-exclusive one R-50e can communicate directly with another R-50e or with another device with software that has been designed specifically for the R-50e. System-exclusive can not be used for communication between two unlike instruments.

Note: In order for data dumps to work properly, the sending and receiving devices must be set for the same MIDI channel.

TRANSMIT

This function is used to send system-exclusive data from the R-50e. All aspects of the unit's system-exclusive parameters are transmitted here.

Connect the MIDI Out from the master R-50e to the MIDI In of the slave device as shown on page 26.

After pressing MIDI, use the **◀** and **▶** keys to select MIDI EXCL and press ENT/REP. RECEIVE is selected using the **◀** and **▶** keys, followed by pressing ENT/REP. A sub-menu of functions is available by pressing ENT/REP. and BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

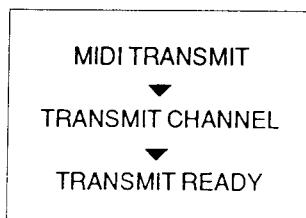
TRANSMIT CHANNEL

This function selects the MIDI channel on which system-exclusive data will be transmitted.

Press ENT/REP. from the MIDI TRANSMIT display. Use the **◀** and **▶** keys to select the desired MIDI channel.

TRANSMIT READY

Press ENT/REP. from the TRANSMIT CHANNEL display. When ready to begin transmission, press START. Press BACK or MIDI if you do not wish to transmit.



EXAMPLE:

Press MIDI.

MIDI SYNC

Use **◀** and **▶** to select MIDI EXCL.

MIDI EXCL

Press ENT./REP. to access TRANSMIT/RECEIVE sub-menu.

MIDI RECEIVE

Use **◀** and **▶** to select TRANSMIT.

MIDI TRANSMIT

Press ENT.REP. to access TRANSMIT CHANNEL.

TRANSMIT CH:1

Use **◀** and **▶** to select transmission channel.

TRANSMIT CH:3

Press ENT./REP. to continue.

TRANSMIT READY

Make sure receiving device is ready to receive. Press START to begin transmission.

TRANSMIT BUSY!

CALL PTN 00.

RECEIVE

Various parts of the R-50e's memory can be accessed via system-exclusive. While these features are all transmitted when doing a system-exclusive data dump, they can be filtered out individually in receive mode.

Connect the MIDI Out of the master unit to the MIDI In of the slave R-50e as shown on page 26.

After pressing MIDI, use the **◀** and **▶** keys to select MIDI EXCL and press ENT/REP. RECEIVE is selected using the **◀** and **▶** keys, followed by pressing ENT/REP. A sub-menu of functions is available by pressing ENT/REP. and BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

MIXER

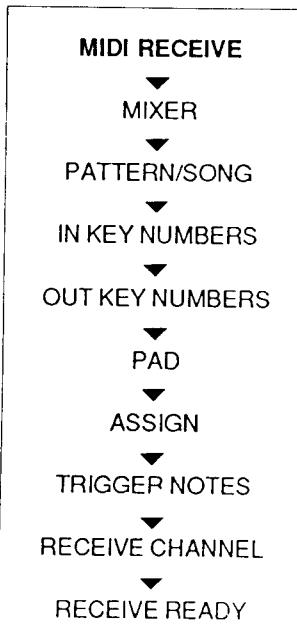
Determines if the MIXER settings are filtered out or received. Also, if MIXER setting is ON live changes to the MIXER section of the master device will be received in real time by the slave.

Press ENT/REP. from the MIDI RECEIVE display. Use the **◀** and **▶** keys to enable or disable receiving MIXER data.

PATTERN AND SONG

Determines if the contents of the patterns and songs are filtered out or received.

Press ENT/REP. from the MIXER display. Use the **◀** and **▶** keys to enable or disable receiving pattern and song data.



EXAMPLE:

Press MIDI.

MIDI	SYNC
------	------

Use **◀** and **▶** to select MIDI EXCL.

MIDI	EXCL
------	------

Press ENT/REP. to access TRANSMIT/RECEIVE sub-menu.

MIDI	TRANSMIT
------	----------

Use **◀** and **▶** to select RECEIVE.

MIDI	RECEIVE
------	---------

Press ENT/REP. to access MIXER filter.

MIXER	OFF
-------	-----

Use **◀** and **▶** to turn parameter on and off.

MIXER	ON
-------	----

(continued)

IN KEY NUMBER

Determines if the MIDI KEY-IN MAP data (set under MIDI IN) is filtered out or received.

Press ENT./REP. from the PATTERN AND SONG display. Use the **◀** and **▶** keys to enable or disable receiving KEY-IN MAP data.

OUT KEY NUMBER

Determines if the MIDI KEY-OUT MAP data (set under MIDI OUT) is filtered out or received.

Press ENT./REP. from the IN KEY NUMBER display. Use the **◀** and **▶** keys to enable or disable receiving KEY-OUT MAP data.

PAD

Determines if the PAD settings for USER 1-8 are filtered out or received.

Press ENT./REP. from the KEY-OUT MAP display. Use the **◀** and **▶** keys to enable or disable receiving PAD data.

ASSIGN

Determines if the ASSIGN settings are filtered out or received.

Press ENT./REP. from the PAD display. Use the **◀** and **▶** keys to enable or disable receiving ASSIGN data.

TRIGGER NOTES

Determines if the TRIGGER NOTE values are filtered out or received.

Press ENT./REP. from the ASSIGN display. Use the **◀** and **▶** keys to enable or disable receiving TRIGGER NOTE data.

EXAMPLE: (continued)

Press ENT./REP. to access PATTERN/SONG filter.

PTN & SONG	OFF
------------	-----

Use **◀** and **▶** to turn parameter on and off.

PTN & SONG	ON
------------	----

Press ENT./REP. to access IN-KEY NUMBER filter.

IN KEY NO.	OFF
------------	-----

Use **◀** and **▶** to turn parameter on and off.

IN KEY NO.	ON
------------	----

Press ENT./REP. to access OUT-KEY NUMBER filter.

OUT KEY NO.	OFF
-------------	-----

Use **◀** and **▶** to turn parameter on and off.

OUT KEY NO.	ON
-------------	----

Press ENT./REP. to access PAD filter.

PAD	OFF
-----	-----

Use **◀** and **▶** to turn parameter on and off.

PAD	ON
-----	----

Press ENT./REP. to access ASSIGN filter.

ASSIGN	OFF
--------	-----

Use **◀** and **▶** to turn parameter on and off.

ASSIGN	ON
--------	----

Press ENT./REP. to access TRIGGER NOTE filter.

TRG. NOTE	OFF
-----------	-----

Use **◀** and **▶** to turn parameter on and off.

TRG. NOTE	ON
-----------	----

(continued)

RECEIVE CHANNEL

This function is used to select the MIDI channel on which the R-50e receives system-exclusive data. If Omni Mode is selected, data is received on all channels.

Press ENT./REP. from the TRIGGER NOTES display. Use the **◀** and **▶** keys to select the appropriate MIDI channel.

RECEIVE READY

Press ENT./REP. from the RECEIVE CHANNEL display. The R-50e will now receive system-exclusive data. Transmit data from master unit.

Press MIDI to return to the MIDI menu. Press MIDI again to exit.

Note: The R-50e will not receive system-exclusive dumps if the display does not read "RECEIVE READY".

EXAMPLE: (continued)

Press ENT./REP. to access RECEIVE CHANNEL.

RECEIVE	CH: 3
---------	-------

Use **◀** and **▶** to select channel system-exclusive data will be received on.

RECEIVE	CH: 8
---------	-------

Press ENT./REP. to continue.

RECEIVE	READY
---------	-------

Send data from master unit.

11. ASSIGN

Various miscellaneous parameters are assignable under this menu. Press ASSIGN (push SWING twice) to access the sub-menus. The **◀** and **▶** keys are used to select between the next level of functions. You can exit this mode at any time by pressing ASSIGN.

```
ASSIGN
  ▼
ASSIGN VOICE
  ▼
ASSIGN INDIVIDUAL OUTPUT
  ▼
ASSIGN FOOTSWITCH
```

ASSIGN VOICE

The R-50e differs from many drum machines in that it has polyphonic capability. In other words, a given drum can play several notes at a time. For example in monophonic mode, re-triggering a cymbal immediately while an earlier cymbal is still ringing would cut off the original sound - the voice is "stolen" from the first event and given to the new event. The R-50e has 8-voice polyphony, meaning that 8 instruments can sound simultaneously. If additional notes are played at the same time the latest notes will be given priority.

Each drum can be assigned to either Mono or Poly mode. (Note: This function governs voice assignment, where Mono and Poly Mode under MIDI refer to something entirely different.) The ENT./REP. and BACK keys are used to choose between functions. After selecting ASSIGN VOICE from the ASSIGN menu, press ENT./REP. to access POLY/MONO mode. The **▲** and **▼** keys select the instrument while the **◀** and **▶** keys switch the current instrument between MONO and POLY.

HI-HAT

While the overall polyphony of the hi-hat is set in the previous step, this function determines whether playing the closed hi-hat (HHCL) will actually close an open hi-hat (HHOP) that is still decaying. In MONO the hi-hat will close under the above circumstances. In POLY HHOP will continue to sound even if a pad using HHCL is played.

Press ENT./REP. to access HI-HAT mode. Use the **◀** and **▶** keys to switch between MONO and POLY modes.

```
ASSIGN VOICE
  ▼
SELECT INSTRUMENT POLY/MONO
  ▼
HI-HAT MODE
```

EXAMPLE:

Press ASSIGN.

```
ASSIGN VOICE
```

Press ENT./REP. to continue.

```
VOICE BD1 POLY
```

Select a drum using **▲** and **▼** keys

```
VOICE BD2 POLY
```

Use **◀** and **▶** to switch between POLY and MONO.

```
VOICE BD2 MONO
```

Press ENT./REP. to access HI-HAT display.

```
HI-HAT MONO
```

Use **◀** and **▶** to choose HI-HAT mode.

```
HI-HAT POLY
```

ASSIGN INDIVIDUAL OUTPUT

Any drum can be assigned to the individual output on the rear panel of the R-50e (labeled INDIV). This might be used to send a given instrument to separate processing or a different channel on a mixer or tape deck. In routing an instrument to the individual output, it is removed from the regular left-right mix outputs and headphones output.

After selecting ASSIGN INDIV from the ASSIGN menu, simply use the **▲** and **▼** keys to select which drum will be routed to the individual output.

Press ENT./REP. or ASSIGN to return to the ASSIGN menu. Press ASSIGN again to exit ASSIGN mode.

EXAMPLE:

Press ASSIGN.

ASSIGN	VOICE
--------	-------

Use **◀** and **▶** to choose ASSIGN function.

ASSIGN	INDIV
--------	-------

Press ENT./REP. to continue.

INDIV	****
-------	------

Use **▲** and **▼** to select Individual Output instrument.

INDIV	SD1
-------	-----

Press ENT./REP to return to ASSIGN menu.

ASSIGN	INDIV
--------	-------

Press ASSIGN again to exit ASSIGN mode.

ASSIGN FOOTSWITCH

Various functions can be assigned to the two footswitch jacks on the rear panel labeled FT.SW.A and FT.SW.B (designed to accept the optional F-1 footswitch). The same functions are available on both footswitches, however a given function can only be assigned to one footswitch at a time.

After selecting ASSIGN FT SW from the ASSIGN menu, press ENT./REP. to access the additional functions. Use ENT./REP. and BACK to switch between FT.SW.A (footswitch A) and FT.SW.B (footswitch B). Then use **◀** and **▶** to assign the desired function.

Press ASSIGN to return to the ASSIGN menu. Press ASSIGN again to exit ASSIGN mode.

FOOTSWITCH FUNCTIONS

PAD 1 - 10

The selected pad will be triggered when the footswitch is depressed.

S/S

The footswitch will start and stop playback of patterns or songs, depending upon the current mode.

PAD#UP

The footswitch will advance PAD to the next drum kit.

PTN#UP

The footswitch will advance to the next higher pattern number when the R-50e is in CALL PATTERN mode.

REPEAT

While recording, the footswitch can be used in place of REPEAT key for repeated beat function.

TAP

The footswitch can be used in place of the TAP button when in TEMPO mode.

HH O/C

The footswitch will close an open hi-hat or open a closed hi-hat.

EXAMPLE:

Press ASSIGN.

ASSIGN	VOICE
--------	-------

Use **◀** and **▶** to choose ASSIGN function.

ASSIGN	FT.SW
--------	-------

Press ENT./REP. to continue.

FT.SW A	TAP
---------	-----

Use **◀** and **▶** to assign function to Footswitch A.

FT.SW A	REPEAT
---------	--------

Press ENT./REP. to advance to Footswitch B.

FT.SW B	PAD1
---------	------

Use **◀** and **▶** to assign function to Footswitch B.

FT.SW B	S/S
---------	-----

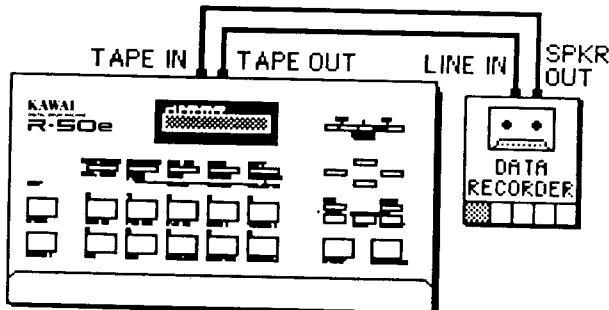
Press ENT./REP to return to ASSIGN menu.

ASSIGN	FT.SW
--------	-------

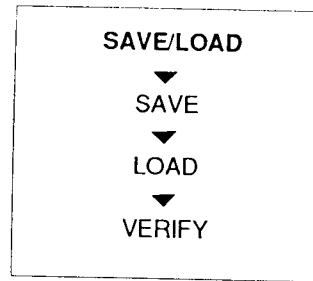
Press ASSIGN again to exit ASSIGN mode.

12. CASSETTE STORAGE

The contents of the R-50e's memory, such as user-defined kits, patterns and songs can be stored on data cassette. Data quality cassette decks and tape work best and decks with options for tape type and noise reduction are not recommended. In order to use cassette storage, proper connections are required:



The CASSETTE menu is accessed by pressing SAVE/LOAD (press COPY twice). Additional functions are accessed using the **◀** and **▶** keys. Press SAVE/LOAD at any time to exit CASSETTE mode.



CASSETTE SAVE

This function is used to store the R-50e's memory contents on cassette tape (the memory remains intact).

Select CASSETTE SAVE from the CASSETTE menu. Put the cassette deck in record mode, then press START on the R-50e to begin the transfer. The display will show "SAVE BUSY!" during the storage procedure. On completion the display will show "SAVE END" briefly before returning to "CASSETTE SAVE". To cancel, press STOP/CONT.

Press SAVE/LOAD to exit CASSETTE mode.

EXAMPLE:

Press SAVE/LOAD.

CASSETTE VERIFY

Use **◀** and **▶** to select function.

CASSETTE SAVE

Begin recording. Press START.

SAVE BUSY!

Wait for process to finish.

SAVE END

Cancel if necessary with STOP/CONT.

CASSETTE SAVE

SAVE BREAK!

CASSETTE SAVE

CASSETTE VERIFY

This function is used to confirm that the data on the tape is the same as the data in memory. In other words, it confirms that the save was done properly.

Select CASSETTE VERIFY from the CASSETTE menu. Rewind the tape to the beginning of the data tone. Begin tape playback. As soon as the data tone starts, press START. The display will show "VERIFY BUSY!" during the procedure. If the tape verifies, the display will read "VERIFY OK" briefly before returning to CASSETTE VERIFY. If the tape does not verify, the display will read "VERIFY". To cancel, press STOP/CONT. If the data on the tape is not the same as the data in memory, ERROR is displayed. In this case, press SAVE/LOAD and then do over the SAVE procedure again.

EXAMPLE:

Use **◀** and **▶** to select function.

CASSETTE VERIFY

Start tape playback. As soon as the data tone begins, press START.

VERIFY BUSY!

Wait for process to finish.

VERIFY OK

Cancel with STOP/CONT if necessary.

CASSETTE VERIFY

VERIFY BREAK!

CASSETTE VERIFY

ERROR is displayed if any data on the tape is incorrect.

VERIFY ERROR

Press SAVE/LOAD to execute SAVE again.

CASSETTE VERIFY

CASSETTE LOAD

This function is used to load new data into the R-50e's memory from tape.

WARNING: LOAD erases all current data from memory. It is recommended that you use SAVE and VERIFY first to save the memory contents.

Select CASSETTE LOAD from the CASSETTE menu. Rewind the tape to the beginning of the data tone. Begin tape playback. As soon as the data tone is heard, press START to begin loading data. The display will show "LOAD BUSY!" during the procedure. On completion, the display will read "LOAD END" briefly before returning to CASSETTE LOAD. To cancel, press STOP/CONT. If ERROR is displayed, press SAVE/LOAD and do over the LOAD procedure again.

EXAMPLE:

Use **◀** and **▶** to select function.

CASSETTE LOAD

Start tape playback. As soon as the data tone is heard, press START.

LOAD BUSY!

Wait for process to finish.

LOAD END

CASSETTE LOAD

Cancel if necessary with STOP/CONT.

LOAD BREAK!

CASSETTE LOAD

Press SAVE/LOAD to exit CASSETTE mode.

COPY ****=***

If ERROR is displayed, press SAVE/LOAD to execute LOAD again.

LOAD ERROR

CASSETTE LOAD

13. MEMORY MANAGEMENT

All of the user-defined functions such as patterns, songs and drum kits draw from the R-50e's available memory. It is possible to fill all of memory, at which point you will receive an "OUT OF MEMORY" message. At this point, you will need to erase some data somewhere before you continue.

CHECKING AVAILABLE MEMORY

It is easy to check how much memory is left by holding ACCENT and pressing CALL PATTERN.

ERASING ALL OF MEMORY

The entire contents of memory can be erased. This should, of course, be used with extreme caution and a cassette back-up should be made if anything in memory is of value.

From CALL PATTERN, REAL TIME RECORD, STEP RECORD or SWING modes, press ACCENT and ERASE simultaneously. Press ENT./REP. to continue. You will receive a second prompt, "SURE?" If you are sure, then press ENT./REP. to verify. Otherwise, press BACK to cancel.

EXAMPLE:

Hold ACCENT and press CALL PATTERN to display available memory.

MEMORY	192
--------	-----

Select CALL PATTERN, REAL TIME REC. or STEP REC.

CALL PTH	00.
----------	-----

Press ACCENT and ERASE.

ERASE ALL MEMORY	
------------------	--

Press ENT./REP. to confirm.

ERASE	SURE?
-------	-------

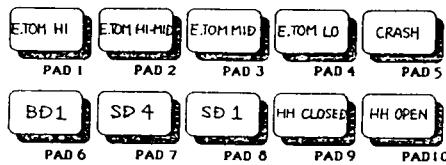
Press ENT./REP. to confirm again.

ERASE EXECUTED	
----------------	--

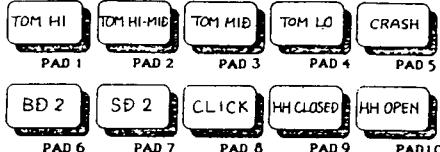
Or, press BACK to cancel.

ERASE CANCEL	
--------------	--

14. R-50e PAD SETTING CHART

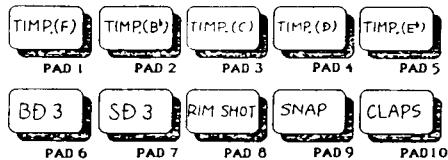


PRE1~4=USER1~4 GT=GATE, DL=DELAY, FL=FLANGE



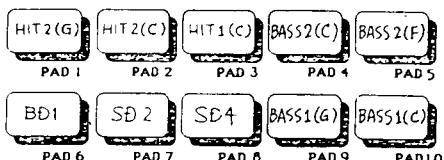
R-50e pad setting value USER(1)

PAD NO.	1	2	3	4	5
Instrument	TOM 1	TOM 2	TOM 3	TOM 3	CRSH
pad level	13	13	13	13	11
accent	+5	+5	+5	+5	+5
tune	0	0	+2	-3	0
panpot	-6	-3	+3	+6	+5
effect					
PAD NO.	6	7	8	9	10
Instrument	BD 1	SD 1	SD 4	HHCL	HHOP
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	0	0	0	0	0
panpot	0	0	0	-6	-6
effect					



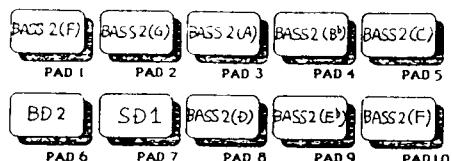
R-50e pad setting value USER(2)

PAD NO.	1	2	3	4	5
Instrument	TOM 4	TOM 4	TOM 5	TOM 5	CRSH
pad level	13	13	13	13	10
accent	+5	+5	+5	+5	+5
tune	+4	0	0	-4	0
panpot	-6	-3	+3	+6	+5
effect					FL:3
PAD NO.	6	7	8	9	10
Instrument	BD 2	SD 2	CLIK	HHCL	HHOP
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	0	0	0	0	0
panpot	0	0	0	-6	-6
effect					DL:2



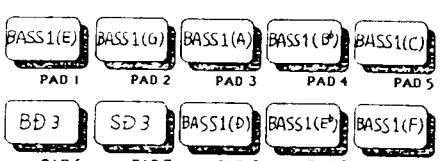
R-50e pad setting value USER(3)

PAD NO.	1	2	3	4	5
Instrument	TIMP	TIMP	TIMP	TIMP	TIMP
pad level	11	11	11	11	11
accent	+5	+5	+5	+5	+5
tune	-7	-2	0	+2	+3
panpot	-3	-1	0	+1	+3
effect					
PAD NO.	6	7	8	9	10
Instrument	BD 3	SD 3	RIM	SNAP	CLAP
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	0	0	0	0	0
panpot	0	0	0	0	0
effect					FL:1



R-50e pad setting value USER(4)

PAD NO.	1	2	3	4	5
Instrument	HIT 2	HIT 2	HIT 1	BAS 2	BAS 2
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	-1	+4	0	0	+5
panpot	0	0	0	0	0
effect					
PAD NO.	6	7	8	9	10
Instrument	BD 1	SD 2	SD 4	BAS 1	BAS 1
pad level	13	13	11	10	10
accent	+5	+5	+5	+2	+2
tune	0	+4	0	-5	0
panpot	0	0	0	0	0
effect					GT:2 FL:3

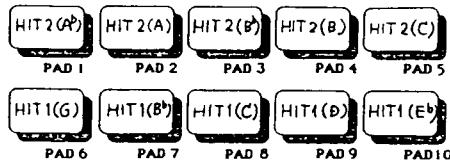


R-50e pad setting value USER(5)

PAD NO.	1	2	3	4	5
Instrument	BAS 2	BAS2	BAS2	BAS2	BAS 2
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	-7	-5	-3	-2	0
panpot	0	0	0	0	0
effect					
PAD NO.	6	7	8	9	10
Instrument	BD 2	SD 1	BAS2	BAS2	BAS2
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	0	+2	+2	+3	+5
panpot	0	0	0	0	0
effect					FL:2 FL:1

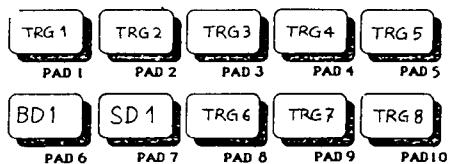
R-50e pad setting value USER(6)

PAD NO.	1	2	3	4	5
Instrument	BAS 1	BAS1	BAS1	BAS1	BAS1
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	-7	-5	-3	-2	0
panpot	0	0	0	0	0
effect					
PAD NO.	6	7	8	9	10
Instrument	BD 3	SD3	BAS1	BAS1	BAS1
pad level	11	13	13	13	13
accent	+1	-3	+5	+5	+5
tune	+2	+2	+2	+3	+5
panpot	0	0	0	0	0
effect					FL:1



R-50e pad setting value **USER(7)**

PAD NO.	1	2	3	4	5
instrument	HIT2	HIT2	HIT2	HIT2	HIT2
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	0	+1	+2	+3	+4
panpot	0	0	0	0	0
effect					
PAD NO.	6	7	8	9	10
instrument	HIT1	HIT1	HIT1	HIT1	HIT1
pad level	13	13	13	13	13
accent	+5	+5	+5	+5	+5
tune	-5	-2	0	+2	+3
panpot	0	0	0	0	0
effect					



R-50e pad setting value **USER(8)**

PAD NO.	1	2	3	4	5
instrument	TRG 1	TRG 2	TRG 3	TRG 4	TRG 5
pad level	11	11	11	11	11
accent	+3	+3	+3	+3	+3
tune	0	0	0	0	0
panpot	0	0	0	0	0
effect					
PAD NO.	6	7	8	9	10
instrument	BD1	SD1	TRG 6	TRG 7	TRG 8
pad level	13	13	11	11	11
accent	+5	+5	+3	+3	+3
tune	0	0	0	0	0
panpot	0	0	0	0	0
effect					



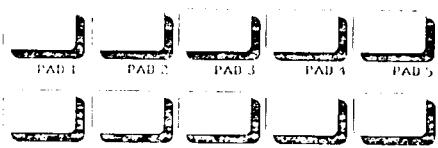
R-50e pad setting value **USER(9)**

PAD NO.	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO.	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					



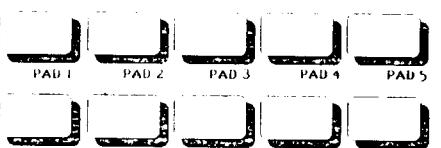
R-50e pad setting value **USER(10)**

PAD NO.	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO.	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					



R-50e pad setting value **USER(11)**

PAD NO.	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO.	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					



R-50e pad setting value **USER(12)**

PAD NO.	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO.	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					

15. MIDI NOTE ASSIGNMENTS

MIDI IN NOTE NUMBER (Default)

NOTE NUMBER	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
INST.	BAS1	BAS2	BAS2	BAS2	BAS2	BAS2	BAS2	BD2	BD3	BD1	SD3	SD1	SD2								
TUNE	-3	-2	-1	0	+1	+2	+3	+4	-7	-6	-5	-4	-3	-2	-1	0	0	0	0	0	
PANPOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
GATE																					
DELAY																					
FLANG																					

NOTE NUMBER	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
INST.	RIM	SD4	HHCL	TOM1	HHOP	TOM2	TOM3	CRSH	TOM4	CLAP	TOM5	CLIK	SNAP	BAS1	BAS1	BAS1	BAS1	BAS2	BAS2	BAS2	
TUNE	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	-4	-3	-2	-1	0	+1	+2
PANPOT	0	0	-6	-3	-6	+3	+6	+5	-3	0	+3	0	0	0	0	0	0	0	0	0	0
GATE																					
DELAY																					
FLANG																					

NOTE NUMBER	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
INST.	BAS2	BAS2	BAS2	BAS2	TIIMP	HIT2	HIT2	HIT2	HIT2												
TUNE	+3	+4	+5	+6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	-1	0	+1	+2	+3
PANPOT	0	0	0	0	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	0	0	0	0	0
GATE																					
DELAY																					
FLANG																					

NOTE NUMBER	84	85	86	87	88	89	90	91													
INST.	HIT1																				
TUNE	0	+1	+2	+3	+4	+5	+6	+7													
PANPOT	0	0	0	0	0	0	0	0													
GATE																					
DELAY																					
FLANG																					

MIDI OUT KEY NO., Ch. and Mixer (Default)

INST.	BD1	BD2	BD3	SD1	SD2	SD3	SD4	RIM	TOM1	TOM2	TOM3	TOM4	TOM5	HHCL	HHOP	CRSH	CLAP	CLIK	SNAP	BAS1	BAS2
MIDI No.	38	36	37	40	41	39	43	42	45	47	48	50	52	44	46	49	51	53	54	24	60
OUT Ch.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mixer Level	14	14	14	14	14	14	14	14	14	14	14	14	14	10	10	14	14	14	14	12	14
Panpot	0	0	0	0	0	0	0	0	-3	+3	+6	-3	+3	-6	-6	+5	0	0	0	0	0

INST.	HIT1	HIT2	TIIMP	TRG1	TRG2	TRG3	TRG4	TRG5	TRG6	TRG7	TRG8	MT									
MIDI No.	84	80	72	48	50	52	53	55	57	59	60										
OUT Ch.	1	1	1	2	2	2	2	2	2	2	2										
Mixer Level	14	14	14	10	10	10	10	10	10	10	10										
Panpot	0	0	0																		

MT = Metronome

16. MIDI DATA FORMAT

1. RECOGNIZED AND TRANSMITTED DATA

1.1 RECOGNIZED

1st	2nd	3rd	Description
1001nnnn	Okkkkkkk	Ovvvvvvv	Note on kkkkkkk=0~127 vvvvvvv=1~127
1100nnnn	Oooooopp		Program ooooopp=0~99 pattern no 100~109 song no
11110010	01111111	0hhhhhhh	Song position pointer 11111111=0~127 least significant hhhhhhh=0~127 most significant
11110011	Osssssss		Song select sssssss=0~9 song no
11111000			Real time clock
11111010			Start
11111011			Stop nnnn=0~15 Channel no

1.2 TRANSMITTED

1st	2nd	3rd	Description
1001nnnn	Okkkkkkk	Ovvvvvvv	Note on/off kkkkkkk=0~127 vvvvvvv=0 off vvvvvvv=1~127
1100nnnn	Oooooopp		Program change ooooopp=0~99 pattern no = 100~109 song no
11110011	Osssssss		Song select sssssss=0~9 song no
11111000			Real time clock
11111010			Start
11111011			Continue
11111100			Stop nnnn=0~15 Channel no

2. RECEIVE AND TRANSMITTED EXCLUSIVE DATA

2.1 ALL DATA DUMP

Status	11110000	F0H	System exclusive
Kawai ID	01000000	40H	
Channel no	00000000	00H	0~15 Transmit ch
Function no	00100001	21H	All data dump
Group no	00000010	02H	Drum machine group
Machine ID	00000010	02H	R 50 ID no
Date	00010010	12H	Mixer data start mark
Data	0000x x x x		1st Level data
Data	0000x x x x		1st Pan data
Data	0000x x x x		2st Level data
Data	0000x x x x		2st Pan data
Date	0000x x x x		Last Level data
Data	0000x x x x		Last Pan data
Data	0000x x x x		MANUAL PAN ON/OFF FLAG data
Data	0000x x x x		MANUAL PAN ON/OFF data
Data	0000x x x x		high
Data	00100010	22H	Mixer data end mark
Data	00010011	13H	MIDI IN KEY NO. Data start mark
Data	0000x x x x		MIDI IN KEY NO. Data block
Data	0000x x x x		1st Instrument data low
Data	0000x x x x		1st Instrument data high
Data	0000x x x x		2nd Instrument data low
Data	0000x x x x		2nd Instrument data high
Data	0000x x x x		Last Instrument data low
Data	0000x x x x		Last Instrument data high
Data	0000x x x x		1st Tune Pan data low
Data	0000x x x x		1st Tune Pan data high
Data	0000x x x x		2nd Tune Pan data low
Data	0000x x x x		2nd Tune Pan data high
Data	0000x x x x		Last Tune Pan data low
Data	0000x x x x		Last Tune Pan data high
Data	00100011	23H	MIDI IN KEY NO. Data end mark
Data	00010100	14H	MIDI OUT KEY NO. Start mark
Data	0000x x x x		MIDI OUT KEY NO. Data block
Data	0000x x x x		1st Out Key no data low
Data	0000x x x x		1st Out Key no data high
Data	0000x x x x		2nd Out Key no data low
Data	0000x x x x		2nd Out Key no data high
Data	0000x x x x		Last Out Key no data low
Data	0000x x x x		Last Out Key no data high
Data	00100100	24H	MIDI OUT KEY NO. end mark
Data	00010101	15H	PAD ASSIGN DATA START mark
Data	0000x x x x		1st PAD data low
Data	0000x x x x		1st PAD data high
Data	0000x x x x		2nd PAD data low
Data	0000x x x x		2nd PAD data high
Data	0000x x x x		Last PAD data low
Data	0000x x x x		Last PAD data high
Data	00100101	25H	PAD ASSIGN DATA End mark
Data	00010110	16H	ASSIGN DATA Start mark
Data	0000x x x x		INDIV INSTRUMENT DATA low
Data	0000x x x x		INDIV INSTRUMENT DATA high
Data	0000x x x x		Foot SWA Data low
Data	0000x x x x		Foot SWA Data high
Data	0000x x x x		Foot SWB Data low
Data	0000x x x x		Foot SWB Data high
Data	0000x x x x		1st Poly. Mono select data low
Data	0000x x x x		1st Poly. Mono select data high
Data	0000x x x x		2nd Poly. Mono select data low
Data	0000x x x x		2nd Poly. Mono select data high

Data	0000x x x x		Last Poly. Mono select data low
Data	0000x x x x		Last Poly. Mono select data high
Data	0000x x x x		Hihat Poly. Mono data low
Data	0000x x x x		Hihat Poly. Mono data high
Data	0000x x x x		Crash Poly. Mono data low
Data	0000x x x x		Crash Poly. Mono data high
Data	00100110	26H	ASSIGN DATA End mark
Data	00010111	17H	TRG NOTE DATA start mark
Data	000x x x x	(01H ~ 1st TRG NOTE data 20H)	TRG NOTE DATA block
Data	000x x x x		Last TRG NOTE data
Data	00100111	27H	TRG NOTE DATA End mark
Data	00010000	10H	Pattern data start mark
Data	0000x x x x		1st data low
Data	0000x x x x		1st data high
Data	00100000	10H	Pattern data end mark
Data	00010000	11H	Song data start mark
Data	0000x x x x		1st data low
Data	0000x x x x		1st data high
(Data)	(00110001)	31H	Song Skip mark
(Data)	(0000oooo)		Song no

2.2 PARAMETER CHANGE

MIXER COMMAND PARAMETER

Status	11110000	F0H	System exclusive
Kawai ID	01000000	40H	
Channel no	00000000	0nH	0~15
Function no	00010000	10H	Parameter change
Group no	00000010	02H	Drum machine group
Machine ID	00000010	02H	R 50 ID no
Date	00000000	00H	Sup. status, mixer command
Date	0mmddddd		parameter, parameter no
Date	0000vvvv		value
m=0, 3	Mode no		
	0 Level		
	3 Pan		
ddddd=0~23	Instrument no		
	0 BD1	8 BD2	16 BD3
	1 SD4	9 SD2	17 SD3
	2 RIM1	10 RIM	18 CLICK
	3 TOM2	11 CLAP	19 BAS2
	4 TOM3	12 HI	20 SD1
	5 HH CLOSED	13 HH OPEN	21 TIMPANI
	6 HT1	14 TOM4	22 SNAP
	7 CRASH	15 TOM5	23 HIT2
vvvv=0~15(Level): Parameter Value			
1~15(Pan): Value			
Mode 0	8	15	
Level min			
Mode 1	7, 8, 9	15	
Pan min			
min center max			
m=2 Manual	Pan ON/OFF		
ddddd+0.15	low		
	high		
Manual Pan ON FFM dddd+15			
vvvv+15			
Manual Pan OFF OOH dddd+0			
vvvv+0			

17. MODEL R-50e MIDI IMPLEMENTATION

Date: Nov. 1987
Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16 1-16	1-16 1-16	Memorized after the power is turned OFF.
Mode	Default Messages Altered	3 X *****	1, 3 OMNI ON/OFF	Memorized after the power is turned OFF.
Note Number	: True voice	* 0-127 *****	* 0-127	Assigned to each sound source.
Velocity	Note ON Note OFF	* ○ X	* ○ X	V=1-127 * VELOCITY ON
After Touch	Key's Ch's	X X	X X	
Pitch Bender		X	X	
	7	X	* ○	* VOLUME ON
Control Change				
Prog Change	: True #	* 0-109 *****	* 0-109	* 00-99 PATTERN 00-99 * 100-109 SONG 0-9
System Exclusive		○	○	Rhythm sequence recognized note setting
System Common	: Song Pos : Song Sel : Tune	X ○ X	○ ○ X	0~9
System Real Time	: Clock : Commands	○ ○	○ ○	(Transmitted during reception, if SYNC=EXT)
Aux Messages	: Local ON/OFF : All Notes OFF : Active Sense : Reset	X X X X	X X X X	
Notes				

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO

○ : Y
X : N

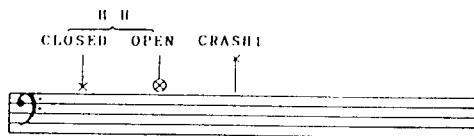
18. SPECIFICATIONS

RHYTHMS:	PATTERNS: 100 SONGS: 10
SOUNDS:	BASS DRUM 1/2/3, SNARE DRUM 1/2/3/4, RIM, TOM 1/2/3/4/5 HI-HAT CLOSED/OPEN, CRASH, CLAPS, CLICK, SNAP, BASS 1/2 ORCHESTRA HIT 1/2, TIMPANI
CONTROLS AND INDICATORS:	MASTER VOLUME, COMMAND SELECT KEYS, ERASE KEY, ACCENT KEY, DRUM PADS (10), INCREMENT KEY, DECREMENT KEY, UP KEY, DOWN KEY, ENTER KEY, BACK KEY, TEMPO KEY (AND INDICATOR), START KEY, STOP/CONTINUE KEY
REAR PANEL:	HEADPHONE JACK, STEREO LEFT (MONO) AND RIGHT OUTPUT JACKS, INDIVIDUAL OUTPUT, MIDI IN/OUT, TAPE IN/OUT, FOOTSWITCH A/B
POWER CONSUMPTION:	5W
DIMENSIONS (W/D/H):	12.6" x 7.7" x 2" 320mm x 195mm x 51mm
WEIGHT:	2.2 lbs. 1.0kg
SUPPLIED ACCESSORIES:	AC ADAPTER, OWNERS MANUAL, PAD INSTRUCTION OVERLAY, AUDIO CABLE
OPTIONAL ACCESSORIES:	FOOTSWITCH (F-1), SOFT CASE

19. R-50e PRESET PATTERN

(NO.50~99)

Notations for cymbals



50, Electro. Pop 1

Three staves for SD4, SD1, and BD1. The SD4 staff has a "CLOSED" instruction above it. The SD1 staff has an "OPEN" instruction above it. The BD1 staff has a "CRASH" instruction above it. The notation consists of various strokes and rests.

51, Electro. Pop 1 Fill in

Three staves for SD4, SD1, and BD1. The SD4 staff has a "CLOSED" instruction above it. The SD1 staff has an "OPEN" instruction above it and an "SD2" instruction above it. The BD1 staff has a "CRASH" instruction above it and a "TOM5" instruction above it. A note: "NOTE: SD2 W/GATE1" is written next to the SD1 staff.

52, Electro. Pop 2

Three staves for SD1, SD1, and BD1. The SD1 staff has a "CLICK" instruction above it. The SD1 staff has an "OPEN" instruction above it. The BD1 staff has a "CRASH" instruction above it. The notation consists of various strokes and rests.

53, Electro. Pop 2 Fill in

Three staves for SD1, SD1, and BD1. The SD1 staff has a "CLICK" instruction above it. The SD1 staff has an "OPEN" instruction above it. The BD1 staff has a "CRASH" instruction above it and a "TOM1" instruction above it. The SD1 staff has a "TOM2" instruction above it and a "TOM3" instruction above it. The notation consists of various strokes and rests.

54, 8beat 1

Three staves for SD2, SD2, and BD2. The SD2 staff has a "CLOSED" instruction above it. The SD2 staff has an "OPEN" instruction above it and an "SD2" instruction above it. The BD2 staff has a "CRASH" instruction above it. The notation consists of various strokes and rests.

55, 8beat 1 Fill in

III CLOSED/OPEN

SD2 TOM5 BD2

56, Disco 1

57. Disco 1 Fill in

58, Electro. Pop 3

III CLOSED SD1 SD2 NOTE: SD2 W/GATE1
BD1 TOM4 TOM4 W/GATE1, DELAY2

59. Electro. Pop 3 Fill in

60. Heavy Rock

61. Heavy Rock Fill in

62. Heavy Metal

63. Heavy Metal Fill in

64, 8beat 2

65, 8beat 2 Fill in

66, Disco 2

NOTE: SD2 W/DELAY2

67, Dilco 2 Fill in

68, Electro. Pop 4

69. Electro. Pop 4 Fill in

CRASH

70, Count

A musical staff with a bass clef. It contains six notes: a quarter note, a eighth note, a sixteenth note, a eighth note, a sixteenth note, and a eighth note. The notes are grouped by vertical bar lines. The first note has a '1' below it, and the second note has a '2' below it. The third note has a '3' below it, and the fourth note has a '4' below it. The fifth note has a '5' below it, and the sixth note has a '6' below it. The notes are connected by horizontal lines, and the stems are pointing upwards.

79, 16beat 4 Fill in

HH CLOSED/OPEN
SD3
BD3

80, 16beat 5

HH CLOSED
SD3
BD3

NOTE: HH CLOSED W/FLANGE1

81, 16beat 5 Fill in 1

HH CLOSED
SD3
BD3

82, 16beat 5 Fill in 2

CRASH
HH CLOSED
SD3
BD3

83, Ballad 1

HH CLOSED
RIM
BD3

NOTE: SD2 W/GATE1

84, Ballad 1 Fill in

HH CLOSED
RIM
BD3

85, Ballad 2

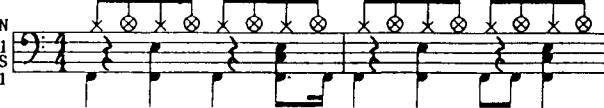
HH OPEN
SD2
BD2

86, Ballad 2 Fill in

HH OPEN
SD2
BD2

87, Disco 3

HH CLOSED/OPEN
SD1 CLAPS
BD1



88, Disco 4

CLICK
SD4
BD3



89, Disco 4 Fill in

CLICK
SD4
BD3



90, Ballad 3

HH CLOSED
RIM
BD3



91, Ballad 3 Fill in

HH CLOSED/OPEN
RIM
BD3



92, Echo

SD2
BD1



93, Shuffle 1

HH CLOSED/OPEN
SD4
BD1



94, Shuffle 1 Fill in

HH CLOSED
SD4
BD1



95, Shuffle 2

HH OPEN
SD2
BD2

NOTE: SD2 W/DELAY1

96, Shuffle 2 fill in

HH OPEN
SD2
BD2

TOM4
TOM4
TOM5

97, Shuffle 3

HH CLOSED
SD3
BD3

98, Shuffle 3 Fill in

HH CLOSED/OPEN
SD3
BD3

SD2 (ACCENT ONLY)

NOTE: SD2 W/GATE1

99, Street Kids

HH OPEN/CLOSED
SNAP

NOTE: SNAP W/DELAY2

KAWAI

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